# APPENDIX M QUALITY IMPROVEMENT SAMPLE INDICATORS

California Vision Group D
System Evaluation and Improvement Group

**CORE QUALITY INDICATORS** 

**PREFACE** 

### **Statewide Quality Indicators**

This document is the final draft of proposed statewide quality indicators, which were developed through the activities of the California Vision Group D (System Evaluation and Improvement Group).

The intent behind the development of these indicators is to standardize the way EMS systems in California use data to measure structures, activities and outcomes. While the use of these indicators as a standardized format and evaluation tool is strongly promulgated, the reporting of these indicators and associated data is intended to be voluntary and **NOT** a mandate.

It is expected that in the fall of 2004, select local EMS systems will voluntarily begin reporting data to evaluate these indicators. The voluntary participation on the State EMS Data Committee will form the foundation for developing a statewide EMS system evaluation and improvement program and ultimately a statewide database. The attached indicators form the basis for these activities.

There are sixteen (16) Core indicators, which are made up of several smaller (120) sub-indicators. Many of the indicators were originally developed through the Mountain-Valley, Los Angeles, North Coast EMS grant project (1998-2000). They have since been subject to extensive review by many EMS constituency groups. Development was also subjected to peer review through the publication process of the Joint Commission on Accreditation of Healthcare Organizations in the March 2001 Journal of Quality Improvement.

Thank you for your assistance in this task.

#### **CORE INDICATORS**

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# Core Quality Indicators

California EMS Authority
EMS System Evaluation and Improvement
Vision Group D

## **CORE INDICATORS**

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PSAP 911 Call Load	AC2A	Structural	911 Calls per 24 hrs of operation	
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911 Call Pick Up	AC2F	Process	Lapse time: first ring to call pick up	
911 Call Effect	AC2G	Process	Lapse time: call pick up to call effect	

AC3 - CORE INDICATOR: ACCESS & UTILIZATION			
SECTION 4: SYSTEM OPERATIONS			
COMPONENT: ACCESS			
SUBJECT: EMS SYSTEM ACCESS – EMERGENCY DISPTACH AGENCY (EDA)			
SUB-QUALITY INDICATOR NDEX CLASS REPORTED INDICATOR ITEM			
EDA Call Load	AC2A	Structural	911 Calls per 24 hrs of operation
EDA Call Effect Load	AC2B	Structural	911 Calls effected per 24 hrs
EDA Call Pick Up	AC2F	Process	Lapse time: first ring to call pick up
EDA Call Effect	AC2G	Process	Lapse time: call pick up to call effect

BH1 - CORE INDICATOR: BASE HOSPITALS			
SECTION 4: SYSTEM OPE	RATIONS		
COMPONENT: BASEHOSF	PITALS		
SUBJECT: ACTIVITY			
Sub-QUALITY INDICATOR NDEX CLASS REPORTED INDICATOR ITER			
Base Hospitals per Response Area Caseloads	BH1A	Structural	Base Hospital per Response Area Caseload
Caseloads per 24 hrs	BH1B	Structural	Medical Control Calls per 24 hr
Caseloads per Authorized Personnel	BH1C	Structural	Medical Control Calls per Authorized Personnel
EMS Base Call Pick up Time	BH1D	Process	Ave Lapse time from call ring to pick up

CA1 - CORE INDICATOR: PULSEL:ESS V-FIB/TACH	UNWITNESSED
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SECTION I: MEDICAL CARE

COMPONENT: CLINICAL

SUBJECT: CARDIAC

00202011 07 11 12 11 10			
Sub-QUALITY INDICATOR	INDEX	CLASS	REPORTED INDICATOR ITEM
Bystander CPR	CA1A	Structure	% of total incidents
PAD-AED	CA1B	Structure	% of total incidents
AED-BLS Personnel	CA1C	Structure	% of total incidents
Lapse Time to First Shock	CA1D	Process	% > 10 mins
Prehospital Defibrillation	CA1E	Structure	% frequency per patient
Number of Shocks	CA1F	Process	average number of shocks per case
Prehospital Defibrillation	CA1G	Outcome	% desired Effect Achieved
Epinephrine Admin	CA1H	Structure	% frequency of admin per case
Epinephrine Admin	CA1I	Outcome	% desired effect achieved
Lidocaine Admin	CA1J	Structure	% frequency of admin per case
Lidocaine Admin	CA1K	Outcome	% desired effect achieved
ROSC	CA1L	Outcome	% ROSC of total incidents
Survival to ED Admit	CA1M	Outcome	% admit to ED of total incidents
Survival to hosp discharge	CA1N	Outcome	% discharge of total incidents

$C \wedge 2$	CODE INDIC	TOP. DILL SE	L:ESS V-FIB/TACH	MITNESSED
CAZ -	CORE INDICA	AIUK: PULSE	L.EOO V-FID/TACE	MILINESSED

SECTION I: MEDICAL CARE

COMPONENT: CLINICAL

SUBJECT: CARDIAC

SUBJECT: CARDIAC			
Sub-QUALITY INDICATOR	INDEX	CLASS	REPORTED INDICATOR ITEM
Bystander CPR	CA2A	Structure	% of total incidents
PAD-AED	CA2B	Structure	% of total incidents
AED-BLS Personnel	CA2C	Structure	% of total incidents
Lapse Time to First Shock	CA2D	Process	% > 10 mins
Prehospital Defibrillation	CA2E	Structure	% frequency per patient
Number of Shocks	CA2F	Process	average number of shocks per case
Prehospital Defibrillation	CA2G	Outcome	% desired Effect Achieved
Epinephrine Admin	CA2H	Structure	% frequency of admin per case
Epinephrine Admin	CA2I	Outcome	% desired effect achieved
Lidocaine Admin	CA2J	Structure	% frequency of admin per case
Lidocaine Admin	CA2K	Outcome	% desired effect achieved
ROSC	CA2L	Outcome	% ROSC of total incidents
Survival to ED Admit	CA2M	Outcome	% admit to ED of total incidents
Survival to hosp discharge	CA2N	Outcome	% discharge of total incidents

#### CA3 - CORE INDICATOR: CHEST PAIN-SUSPECTED CARDIAC ORIGIN

SECTION I: MEDICAL CARE

COMPONENT: CLINICAL

SUBJECT: CARDIAC

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Sub-QUALITY INDICATOR	INDEX	CLASS	REPORTED INDICATOR ITEM
Oxygen Admin	CA3A	Process	% of total incidents
Oxygen Admin	CA3B	Outcome	% desired effect
NTG Admin	CA3C	Process	% of total incidents
NTG Admin	CA3D	Outcome	% desired effect
MS Admin	CA2E	Process	% of total incidents
MS Admin	CA3F	Outcome	% desired effect
ASA Admin	CA2G	Process	% of total incidents
Scene Time	CAH	Process	Average lapse time on scene
Decrease/relief of symptoms	CA2I	Outcome	% of total incidents
Survival to hosp discharge	CA2J	Outcome	% of total incidents

#### **ED1 - CORE INDICATOR: EMS EDUCATION & TRAINING**

**SECTION 4: SYSTEM OPERATIONS** 

COMPONENT: TRAINING & EDUCATION

SUBJECT: STUDENT PROFILES					
Sub-QUALITY INDICATOR	NDEX	CLASS	REPORTED INDICATOR ITEM		
EMT-1 Training	ED1A	Structural	Completions per year		
EMT-1 Training	ED1B	Process	% cert per year		
EMT-P Training	ED1C	Structural	Seats available per year		
EMT-P Training	ED1D	Structural	Completions per year		
EMT-P Training	ED1E	Process	% License per year		
EMT-P Training  Job Placement	ED1F	Process	% initially employed as EMT-P		
Approved CE Providers	ED1G	Structural	number of Approved CE Providers		
CEU's offered per year	ED1H	Structural	Hrs per year		

MA1 - CORE INDICATOR: MANPOWER

**SECTION 4: SYSTEM OPERATIONS** 

COMPONENT: MANPOWER

SUBJECT: UNIT CONFIGURATIONS

SUB-QUALITY INDICATOR	NDEX	CLASS	REPORTED INDICATOR ITEM	
2 ALS Provider Response Unit Configuration Survival cardiac Arrest	MA1A	Outcome	% Survival Cardiac Arrest 2 ALS Provider Response	
ALS Provider     Response Unit Configuration Survival cardiac Arrest	MA1B	Outcome	% Survival Cardiac Arrest 1 ALS Provider Response	
2 ALS Provider Response Unit Configuration Survival Critical Trauma	MA1C	Outcome	% Survival Critical Trauma 2 ALS Provider Response	
2 ALS Provider Response Unit Configuration Survival Critical Trauma	MA1D	Outcome	% Survival Critical Trauma 1 ALS Provider Response	

#### PP1 - CORE INDICATOR: PUBLIC EDUCATION & PREVENTION

**SECTION 4: SYSTEM OPERATIONS** 

COMPONENT: PUBLIC ED & PREVENTION

SUBJECT: PUBLIC INTEGRATION

Sub-QUALITY INDICATOR	NDEX	CLASS	REPORTED INDICATOR ITEM
Bystander CPR	PP1A	Structural	% Response area population trained in bystander CPR
PAD-AED	PP1B	Structural	% Response area population trained with PADAED resources available

## RE1 - CORE INDICATOR: SHORTNESS OF BREATH SIGNS & SYMPTOMS OF BRONCH SPASM

SECTION I: MEDICAL CARE

COMPONENT: CLINICAL

SUBJECT: RESPIRATORY

Sub-QUALITY INDICATOR	INDEX	CLASS	REPORTED INDICATOR ITEM
Oxygen Admin	RE1A	Process	% of total incidents
Oxygen Admin	RE1B	Outcome	% desired effect
NTG Admin	RE1C	Process	% of total incidents
NTG Admin	RE1D	Outcome	% desired effect
MS Admin	RE1E	Process	% of total incidents
MS Admin	RE1F	Outcome	% desired effect
Furosemide Admin	RE1G	Process	% of total incidents
Furosemide Admin	RE1H	Outcome	% desired effect
Relief of symptoms	RE11	Outcome	% of total incidents
Provider Impression Match Match ED Diagnosis	RE1J	Outcome	% of total incidents
Survival to hosp discharge	RE1K	Outcome	% Survival

# RE2 - CORE INDICATOR: SHORTNESS OF BREATH SIGNS & SYMPTOMS OF FLUID OVERLOAD

SECTION I: MEDICAL CARE

COMPONENT: CLINICAL SUBJECT: RESPIRATORY

Sub-QUALITY INDICATOR	INDEX	CLASS	REPORTED INDICATOR ITEM
Oxygen Admin	RE2A	Process	% of total incidents
Oxygen Admin	RE2B	Outcome	% desired effect
NTG Admin	RE2C	Process	% of total incidents
NTG Admin	RE2D	Outcome	% desired effect
MS Admin	RE2E	Process	% of total incidents
MS Admin	RE2F	Outcome	% desired effect
Furosemide Admin	RE2G	Process	% of total incidents
Furosemide Admin	RE2H	Outcome	% desired effect
Relief of symptoms	RE21	Outcome	% of total incidents
Provider Impression Match Match ED Diagnosis	RE2J	Outcome	% of total incidents
Survival to hosp discharge	RE1K	Outcome	% Survival

### RF1 - CORE INDICATOR: RECEIVING FACILITIES

**SECTION 4: SYSTEM OPERATIONS** 

COMPONENT: RECEIVING FACILITY

SUBJECT: PATIENT DESTINATION PROFILES

Sub-QUALITY INDICATOR	NDEX	CLASS	REPORTED INDICATOR ITEM
Transfers	RF1A	Structural	% transfers per total received
Diversion	RF1B	Structural	% diversions per total designated transports
Lapse Transport Time - Pt Diversion	RF1C	Process	Average lapse transport time per pt diversion
Transfer due to cost	RF1D	Structural	% of all transfers
Transfer due to higher level of medical care	RF1E	Structural	% of all transfers

RS1 - CORE INDICATOR: RESPONSE						
SECTION 4: SYSTEM OPERA	TIONS					
COMPONENT: RESPONSE						
SUBJECT: RESPONSE UNIT	SUBJECT: RESPONSE UNIT					
Sub-QUALITY INDICATOR	NDEX	CLASS	REPORTED INDICATOR ITEM			
Response Unit Queue Time	RS1A	Process	Lapse time PSAP Call effect to unit enroute			
Response Unit Roll Time	RS2B	Process	Lapse time unit enroute to on-scene			

#### SK1 - CORE INDICATOR: PREHOSPITAL ADVANCED PROVIDER SKILLS

SECTION I: MEDICAL CARE

COMPONENT: CLINICAL

SUBJECT: SKILL RATES

<u> </u>			
Sub-QUALITY INDICATOR	NDEX	CLASS	REPORTED INDICATOR ITEM
Adult ET – oral fre quency	SK1A	Structural	frequency performed per year per licensed personnel
Adult ET – oral Insertion	SK1B	Process	% insertion per total attempts
Adult ET –nasal frequency	SK1C	Structural	frequency performed per year per licensed personnel total
Adult ET - nasal Insertion	SK1D	Process	% insertion per total attempts
Ped ET – oral frequency	SK1E	Structural	frequency performed per year per licensed personnel
Ped ET - oral Insertion	SK1F	Process	% insertion per total attempts
Ped IV frequency	SK1G	Structural	frequency performed per year per licensed personnel
Ped IV Insertion	SK1H	Process	% insertion per total attempts
Ped IO frequency	SK1I	Structural	frequency performed per year per licensed personnel
Ped IO Insertion	SK1J	Process	% insertion per total attempts

	DESIGNATED	

**SECTION 4: SYSTEM OPERATIONS** 

COMPONENT: DESIGNATED TRAUMA HOSPITALS

SUBJECT: ACTIVITY

Sub-QUALITY INDICATOR	NDEX	CLASS	REPORTED INDICATOR ITEM
Designated Trauma Hospitals per Response Area	TH1A	Structural	Number of Designated Trauma Hospitals per Response Area
Trauma Cases received per 24 hrs	TH1B	Structural	Average Number of Trauma Cases received per 24 hrs

### TR1 - CORE INDICATOR: CRITICAL TRAUMA

SECTION I: MEDICAL CARE

COMPONENT: CLINICAL

SUBJECT: TRAUMA

Sub-QUALITY INDICATOR	INDEX	CLASS	REPORTED INDICATOR ITEM
Frequency Blunt Mechanism	TR1A	Structural	% of total incidents
Frequency Penetrating Mechanism	TR1B	Structural	% of total incidents
Frequency Pediatric	TR1C	Structural	% of total incidents
Frequency Head, Neck, Face	TR1D	Structural	% of total incidents
Frequency Chest	TR1E	Structural	% of total incidents
Frequency Abdomen	TR1F	Structural	% of total incidents
Frequency Burns	TR1G	Structural	% of total incidents
Lapse time on scene>10 min	TR1H	Process	% of total incidents
Transport time > 10 min	TR1I	Process	% of total incidents
Transport time > 20 min	TR1J	Process	% of total incidents
Triage to Specialty Facility	TR1K	Process	% of total incidents
Advanced Airway Inserted	TR 1L	Process	% of total incidents
Prehospital Oxygenation	TR1M	Process	% o O2 > 98%
Survival to ED admit	TR1N	Outcome	% of total incidents
Survival to hosp discharge	TR10	Outcome	% of total incidents

CORE INDICATOR INDEX # AC2A	ACCESS & UTILIZATION					
Measure	EMS Call Load – 911 PSAP					
CORE INDICATOR REF	SYSTEM OPERATIONS					
#AC2	ACCESS & UTILIZATION	alls for EMS services received by a				
Objective	Public Access Answering Poi twenty-four (24) hour period (	int (PSAP) during a specified				
Classification	□ System Operations - Access					
Type of Measure	□ Process					
Domain of Performance	□ Volume					
Indicator Reporting Value	□ Number per 24 hr period					
Display Format	□ Cube Chart □ Bar Chart □ Line Graph					
Frequency of Display	☐ Monthly x 12					
Measures of Central Tendency	□ mean - Yes □ mode - No □ variance - Yes □ standard deviation - Yes					
Trending Analysis	□ Yes					
Minimum Data Values	□ 30 values per measure					
Sampling	□ Periodic - Rate					
Aggregation	□ Yes					
Blinded	□ Yes					
Beta Testing	□ None to Date					
Population Denominator (D)	24 hour period of time					
Denominator	Inclusion Criteria EMSA Data Elements					
	<ul> <li>PSAP's which receive EMS Service Calls by 911</li> <li>PSAP's which Operate 24 hours</li> <li>All hours recorded within a full day of PSAP service</li> </ul>	<ul><li>EMSA#</li><li>EMSA#</li><li>EMSA#</li></ul>				
Denominator Data Source	<ul><li>PSAP Records</li><li>EMS Provider Records</li></ul>					

Population Subset Numerator (N)	the total number of 911 calls received by PSAP where caller request EMS services			
Numerator	Inclusion Criteria	EMSA Data Elements		
	□ Calls received by PSAP □ 911 calls where caller request EMS services	□ EMSA#		
Numerator Data Source	<ul><li>PSAP Records</li><li>EMS Provider Records</li></ul>			
Description of Indicator Formula	□ (N) 911 EMS calls received p	per (D-24) hour period.		
Indicator Formula Numeric Expression	□ N per D			
Linkage	Linkage Options	EMSA Data Elements		
	<ul><li>PSAP Identifier</li><li>Scene Address</li><li>Response Unit</li><li>Time of Call</li></ul>	□ EMSA # □ EMSA # □ EMSA # □ EMSA #		
Stratification	Options	EMSA Data Elements		
	□ by PSAP □ by Hour □ by Incident type	□ EMSA# □ EMSA# □ EMSA#		
Indicator Exclusion Criteria	<ul><li>Calls where EMS service no</li><li>Calls not received by 911 ph</li></ul>			
References	<ul> <li>American Heart Association. Circulation, 2000; 102: Suppl.1</li> <li>Clawson J: Regulations and standards for emergency medical dispatchers; a model for state or region, Emergency medical Services 13:4, 1984</li> <li>Clawson, J.J (1989, May-June). Emergency Medical Dispatching. Prehospital and Disaster Medicine, p. 125-152</li> <li>Davis, C. 1998, May-June). Touring Americas PSAP's: US Communication Centers. 9-1-1 Magazine, 52</li> <li>Gilbert, S. (1998, July-August). Pathway management – Back to basics. 9-1-1 magazine, 64</li> <li>National Emergency Number Assn (1999). How 911 works. On-Line www.nena911.org.</li> <li>Stratton, S: Triage by emergency medical dispatchers, Prehospital Disaster Medicine 7:379, 1992</li> </ul>			
Source	□ California EMSA Vision Proje	ect 2002		

CORE INDICATOR INDEX # AC2B	ACCESS & UTILIZATION				
Measure	EMS Call Effect Load – 911 PS	AP			
CORE INDICATOR REF	SYSTEM OPERATIONS				
#AC2	ACCESS & UTILIZATION				
Objective	received (Effected) by respor	received (Effected) by responding EMS units by a Public Access Answering Point (PSAP) during a specified twenty-fours (24)			
Classification	□ System Operations - Access				
Type of Measure	□ Process				
Domain of Performance	□ Volume				
Indicator Reporting Value	□ Number per 24 hr period				
Display Format	□ Cube Chart □ Bar Chart □ Line Graph				
Frequency of Display	□ Monthly x 12				
Measures of Central Tendency	□ mean - Yes □ mode - No □ variance - Yes □ standard deviation - Yes				
Trending Analysis	□ Yes				
Minimum Data Values	□ 30 values per measure				
Sampling	□ Periodic - Rate				
Aggregation	□ Yes				
Blinded	□ Yes				
Beta Testing	□ None to Date				
Population Denominator (D)	□ 24 hour period of time				
Denominator	Inclusion Criteria	EMSA Data Elements			
	<ul> <li>□ PSAP's which receive EMS Service Calls by 911</li> <li>□ PSAP's which Operate 24 hours</li> <li>□ All hours recorded within a full day of PSAP service</li> </ul>	□ EMSA# □ EMSA#			
Denominator Data Source	□ PSAP Records				

	□ EMS Provider Records				
Population Subset Numerator (N)	the total number of 911 calls received by PSAP and communicated (Effected) to a responding EMS unit				
Numerator	Inclusion Criteria	EMSA Data Elements			
Numerator Data Source	<ul><li>PSAP Records</li><li>EMS Provider Records</li></ul>				
Description of Indicator Formula	u numerator value (N) shown p	per 24 hour denominator value (D)			
Indicator Formula Numeric Expression	□ (N) 911 EMS calls effected p	er (D-24) hour period.			
Linkage	Linkage Options EMSA Data Elements				
	<ul><li>PSAP Identifier</li><li>Scene Address</li><li>Response Unit</li><li>Time of Call</li></ul>	□ EMSA # □ EMSA # □ EMSA # □ EMSA #			
Stratification	Options	EMSA Data Elements			
Indicator Exclusion Criteria	<ul> <li>by PSAP</li> <li>by Hour</li> <li>by Incident type</li> <li>by Responding unit</li> <li>Calls where EMS service no</li> </ul>	□ EMSA # □ EMSA # □ EMSA # □ EMSA # □ trequested			
indicator Exclusion officeria	<ul><li>Calls not received by 911 ph</li><li>Calls where EMS Response</li></ul>				
References	<ul> <li>American Heart Association. Circulation, 2000; 102: Suppl.1</li> <li>Clawson J: Regulations and standards for emergency medical dispatchers; a model for state or region, Emergency medical Services 13:4, 1984</li> <li>Clawson, J.J (1989, May-June). Emergency Medical Dispatching. Prehospital and Disaster Medicine, p. 125-152</li> <li>Davis, C. 1998, May-June). Touring Americas PSAP's: US Communication Centers. 9-1-1 Magazine, 52</li> <li>Gilbert, S. (1998, July-August). Pathway management – Back to basics. 9-1-1 magazine, 64</li> <li>National Emergency Number Assn (1999). How 911 works. On-Line www.nena911.org.</li> <li>Stratton, S: Triage by emergency medical dispatchers, Prehospital Disaster Medicine 7:379, 1992</li> </ul>				
Source	□ California EMSA Vision Proje	ect 2002			

CORE INDICATOR INDEX # AC2C	ACCESS & UTILIZATION				
Measure	Lapse Time: First Ring to Call Pick Up 911 PSAP				
CORE INDICATOR REF #AC2 Objective	SYSTEM OPERATIONS ACCESS & UTILIZATION	o timo in minutos + soconde from			
Objective	the beginning of first ring to c	to measure the average lapse time in minutes + seconds from the beginning of first ring to call pick up for all 911 calls for EMS services which are received by a Public Access Answering Point			
Classification	☐ System Operations - Access				
Type of Measure	□ Process				
Domain of Performance	□ Efficiency				
Indicator Reporting Value	□ Average time in Minutes + Se	econds			
Display Format	□ Cube Chart				
	□ Line Graph				
Francisco of Display	□ Process Control Chart				
Frequency of Display Measures of Central	☐ Monthly x 12 ☐ mean - Yes				
Measures of Central Tendency	<ul><li>□ mean - Yes</li><li>□ mode - Yes</li></ul>				
rendency	□ variance - Yes				
	standard deviation - Yes				
Trending Analysis	☐ Yes				
Minimum Data Values	□ 30 values per measure				
Sampling	□ Periodic - Rate				
Aggregation	□ Yes				
Blinded	□ Yes				
Beta Testing	□ None to Date				
Population Denominator (D)	the total number of 911 calls received by PSAP where a request for EMS services is accepted				
Denominator	Inclusion Criteria EMSA Data Elements				
	□ All calls received by a	□ EMSA#			
	PSAP's where there is a				
	request for EMS Services	□ EMSA#			
	☐ All Calls reviewed during a	D EMCA#			
	specified period of time. Specified period of time; i.e. 1	□ EMSA#\			
	month, year, etc. time must be				
	the same for numerator data	□ EMSA#\			
Denominator Data Source	<ul><li>PSAP Records</li><li>EMS Provider Records</li></ul>				
Population Subset Numerator (N)	<ul> <li>Total aggregate number when lapsed times from each call are all added together.</li> </ul>				
Numerator	Inclusion Criteria EMSA Data Elements				
	□ All lapse times from first	□ EMSA#			
	ring to call pick up by				
	PSAP	□ EMSA#			
	□ 911 calls where caller	D FMCA#			
	request EMS services	□ EMSA#			
	<ul><li>Specified period of time;</li><li>i.e. 1 month, year, etc. time</li></ul>	□ EMSA#			
	must be the same for				
	numerator data				
Numerator Data Source	□ PSAP Records				

	□ EMS Provider Records			
Description of Indicator		numerator value total of lapse times added together (N) per		
Formula		number of calls received by PSAP (D)		
Indicator Formula		(N) total time in minutes + seconds per total calls received per		
Numeric Expression		(D-24) hour period.	·	
Linkage	Lir	nkage Options	EMSA Data Elements	
		PSAP Identifier	□ EMSA#	
		Scene Address	□ EMSA#	
		Response Unit	□ EMSA#	
		Time of Call	□ EMSA#	
Stratification		Options	EMSA Data Elements	
		by PSAP	□ EMSA#	
		by Time of Day	□ EMSA#	
		by Incident type	□ EMSA#	
		by Responding unit	□ EMSA#	
Indicator Exclusion Criteria		Calls where EMS service no		
References		Calls not received by 911 ph		
References		<ul> <li>Clawson, J.J (1989, May-June). Emergency Medical Dispatching. Prehospital and Disaster Medicine, p. 125-</li> <li>Davis, C. 1998, May-June). Touring Americas PSAP's: Communication Centers. 9-1-1 Magazine, 52</li> <li>Gilbert, S. (1998, July-August). Pathway management – Back to basics. 9-1-1 magazine, 64</li> <li>National Emergency Number Assn (1999). How 911 wo On-Line www.nena911.org.</li> <li>American Heart Association. Circulation, 2000; 102: Suppl.1American Heart Association. Circulation, 2000; Suppl.1</li> <li>Clawson J: Regulations and standards for emergency medical dispatchers; a model for state or region, Emerg medical Services 13:4, 1984</li> <li>Clawson, J.J (1989, May-June). Emergency Medical Dispatching. Prehospital and Disaster Medicine, p. 125-</li> <li>Davis, C. 1998, May-June). Touring Americas PSAP's: Communication Centers. 9-1-1 Magazine, 52</li> <li>Gilbert, S. (1998, July-August). Pathway management – Back to basics. 9-1-1 magazine, 64</li> <li>National Emergency Number Assn (1999). How 911 wo On-Line www.nena911.org.</li> <li>Stratton, S: Triage by emergency medical dispatchers,</li> </ul>		
_		Prehospital Disaster Medicine 7:379, 1992		
Source		California EMSA Vision Proje	ect 2002	

CORE INDICATOR INDEX # AC2D	ACCESS & UTILIZATION				
Measure	<u>Lapse Time: Call Effect</u> 911 PSAP				
CORE INDICATOR REF #AC2	SYSTEM OPERATIONS ACCESS & UTILIZATION				
Objective	the time a call is picked up I	se time in minutes + seconds from by a Public Access Answering Point			
	acknowledged) by a respon	ted (transferred or broadcast and ding EMS unit.			
Classification	□ System Operations - Acces				
Type of Measure	□ Process				
Domain of Performance	□ Efficiency				
Indicator Reporting Value	<ul><li>Average time in Minutes + S</li><li>Cube Chart</li></ul>	Seconds			
Display Format	☐ Cube Chart ☐ Line Graph				
	□ Process Control Chart				
Frequency of Display	☐ Monthly x 12				
Measures of Central	□ mean - Yes				
Tendency	□ mode - Yes				
	□ variance - Yes				
	<ul><li>standard deviation - Yes</li></ul>				
Trending Analysis					
Minimum Data Values	□ 30 values per measure				
Sampling	Periodic - Rate				
Aggregation Blinded		□ Yes			
Beta Testing	☐ Yes				
Population Denominator (D)	<ul><li>None to Date</li><li>the total number of 911 calls received by PSAP where a request</li></ul>				
	for EMS services is effected				
Denominator	Inclusion Criteria EMSA Data Elements				
	<ul><li>All calls received by a</li></ul>	□ EMSA#			
	PSAP's where there is a				
	request for EMS Services	□ EMSA#			
	<ul> <li>All Calls reviewed during a specified period of time.</li> </ul>	□ EMSA#\			
	□ Specified period of time;	□ EMSA#\			
	i.e. 1 month, year, etc. time				
	must be the same for	□ EMSA#\			
	numerator data				
Denominator Data Source	☐ PSAP Records				
Denominator Data Source	<ul><li>□ PSAP Records</li><li>□ EMS Provider Records</li></ul>				
Population Subset		en lapsed times from each EMS call			
Numerator (N)	effected is all added together.				
Numerator	Inclusion Criteria EMSA Data Elements				
	□ All lapse times from first	□ EMSA#			
	ring to call pick up				
	□ 911 Calls received by	□ EMSA#			
	PSAP	D EMOA#			
	□ 911 calls where caller	□ EMSA#			
	request EMS services  Specified period of time;	□ EMSA#			
	i.e. 1 month, year, etc. time				
	must be the same for				

		numerator data				
Numerator Data Source		PSAP Records				
Description of Indicator		numerator value total of lapse	e tim	nes added together (N) per		
Formula		number of calls received by F		• , , ,		
Indicator Formula				ds per total calls received per		
Numeric Expression		(D-24) hour period.		·		
Linkage	Lir	nkage Options	ΕN	ISA Data Elements		
		PSAP Identifier		EMSA #		
		Scene Address		EMSA #		
		Response Unit		EMSA#		
		Time of Call		EMSA #		
Stratification		Options		EMSA Data Elements		
		by PSAP		EMSA #		
		by Time of Day		EMSA #		
		by Incident type		EMSA #		
		by Responding unit		EMSA#		
Indicator Exclusion Criteria		□ Calls where EMS service not requested				
D. C.	ш	□ Calls not received by 911 phone line				
References		Clawson, J.J (1989, May-June). Emergency Medical				
		Dispatching. Prehospital and Disaster Medicine, p. 125-152				
				Touring Americas PSAP's: US		
		Communication Centers.				
			_	t). Pathway management –		
		Back to basics. 9-1-1 ma				
				Assn (1999). How 911 works.		
		On-Line www.nena911.org.				
		<ul> <li>American Heart Association. Circulation, 2000; 102:</li> <li>Suppl.1American Heart Association. Circulation, 2000; 102:</li> </ul>				
			4550	ciation. Circulation, 2000; 102:		
		<ul><li>Suppl.1</li><li>Clawson J: Regulations a</li></ul>	and	standards for emergency		
				I for state or region, Emergency		
		medical Services 13:4, 1		Tion state of region, Emergency		
		<ul> <li>Clawson, J.J (1989, May</li> </ul>		e). Emergency Medical		
				Disaster Medicine, p. 125-152		
		<ul> <li>Davis, C. 1998, May-Jun</li> </ul>	e). 1	Touring Americas PSAP's: US		
		Communication Centers.				
	Gilbert, S. (1998, July-August). Pathway management –					
		Back to basics. 9-1-1 ma				
	National Emergency Number Assn (1999). How 911 works.					
	On-Line <u>www.nena911.org</u> .					
	Stratton, S: Triage by emergency medical dispatchers,					
	Prehospital Disaster Medicine 7:379, 1992					
Source		California EMSA Vision Proje	ect 2	.002		

CORE INDICATOR INDEX # AC3A	ACCESS & UTILIZATION					
Measure	Call Load – EMS Dispatch Center					
CORE INDICATOR REF #AC2	SYSTEM OPERATIONS ACCESS & UTILIZATION					
Objective		for EMS services received by an a specified twenty-four (24) hour				
Classification	<ul><li>System Operations - Access</li></ul>					
Type of Measure	□ Process					
Domain of Performance	□ Volume					
Indicator Reporting Value	Number per 24 hr period					
Display Format	□ Cube Chart					
	☐ Bar Chart					
Fraguency of Display	☐ Line Graph ☐ Monthly x 12					
Frequency of Display  Measures of Central	mean - Yes					
Tendency	□ mode - No					
remachey	□ variance - Yes					
	□ standard deviation - Yes					
Trending Analysis	□ Yes					
Minimum Data Values	□ 30 values per measure					
Sampling	□ Periodic - Rate					
Aggregation	□ Yes					
Blinded	□ Yes					
Beta Testing	□ None to Date					
Population Denominator (D)	□ 24 hour period of time					
Denominator	Inclusion Criteria	Inclusion Criteria EMSA Data Elements				
	<ul> <li>EMS Dispatch Center which receive EMS Service Calls by 911</li> <li>EMS Dispatch Center which Operate 24 hours</li> <li>All hours recorded within a full day of EMS Dispatch Center service</li> </ul>	□ EMSA# □ EMSA#				
Denominator Data Source	□ EMS Dispatch Center					
	□ PSAP Records					
	■ EMS Provider Records					
Population Subset		eived by EMS Dispatch Center				
Numerator (N)	where caller request EMS se					
Numerator	Inclusion Criteria	EMSA Data Elements				
	<ul> <li>Calls received by EMS         Dispatch Center     </li> <li>Calls where caller request         EMS services     </li> </ul>	□ EMSA#				
	□ PSAP Records					
Numerator Data Source	□ EMS Provider Records					

Indicator Formula Numeric Expression		N per D			
Linkage	Lin	kage Options	EN	ISA Data Elements	
		EMS Dispatch Center Identifier Scene Address Response Unit Time of Call		EMSA # EMSA # EMSA # EMSA #	
Stratification		Options		EMSA Data Elements	
		by EMS Dispatch Center by Hour by Incident type		EMSA # EMSA # EMSA #	
Indicator Exclusion Criteria					
References		<ul> <li>American Heart Association. Circulation, 2000; 102: Suppl.1</li> <li>Clawson J: Regulations and standards for emergency medical dispatchers; a model for state or region, Emergency medical Services 13:4, 1984</li> <li>Clawson, J.J (1989, May-June). Emergency Medical Dispatching. Prehospital and Disaster Medicine, p. 125-152</li> <li>Davis, C. 1998, May-June). Touring Americas PSAP's: US Communication Centers. 9-1-1 Magazine, 52</li> <li>Gilbert, S. (1998, July-August). Pathway management – Back to basics. 9-1-1 magazine, 64</li> <li>National Emergency Number Assn (1999). How 911 works. On-Line www.nena911.org.</li> <li>Stratton, S: Triage by emergency medical dispatchers, Prehospital Disaster Medicine 7:379, 1992</li> </ul>			
Source		California EMSA Vision Proje	ect 2	2002	

CORE INDICATOR INDEX # AC3B	ACCESS & UTILIZATION					
Measure	EMS Call Effect Load – EMS Dispatch Center					
CORE INDICATOR REF #AC2 Objective	SYSTEM OPERATIONS ACCESS & UTILIZATION  to measure number of calls for EMS services which are received (Effected) by responding EMS units by an EMS					
Classification	Dispatch Center during a specific of time.  System Operations - Access	Dispatch Center during a specified twenty-four (24) hour period of time.				
Type of Measure	□ Process					
Domain of Performance	□ Volume					
Indicator Reporting Value	Number per 24 hr period					
Display Format	□ Cube Chart □ Bar Chart □ Line Graph					
Frequency of Display	☐ Monthly x 12					
Measures of Central	mean - Yes					
Tendency	□ mode - No					
	□ variance - Yes					
	<ul><li>standard deviation - Yes</li></ul>					
Trending Analysis	□ Yes					
Minimum Data Values	30 values per measure					
Sampling	□ Periodic - Rate					
Aggregation		□ Yes				
Blinded	□ Yes					
Beta Testing	□ None to Date					
Population Denominator (D)	□ 24 hour period of time					
Denominator	Inclusion Criteria EMSA Data Elements					
	□ EMS Dispatch Center	□ EMSA#				
	which receive EMS Service					
	Calls by 911	□ EMSA#				
	□ EMS Dispatch Center	□ F840 A #				
	which Operate 24 hours	□ EMSA#				
	☐ All hours recorded within a					
	full day of EMS Dispatch Center service					
	Comer convice					
Denominator Data Source	□ EMS Dispatch Center Record	ds				
	<ul><li>□ PSAP Records</li><li>□ EMS Provider Records</li></ul>					
Population Subset		ived by EMS Dispatch Center and				
Numerator (N)		•				
Numerator	communicated (Effected) to a responding EMS unit Inclusion Criteria EMSA Data Elements					
	<ul><li>Calls received by EMS</li><li>Dispatch Center</li></ul>	□ EMSA#				
	<ul><li>calls where caller request</li><li>EMS services</li></ul>	□ EMSA#				
	Request communicated or broadcast to an appropriate	□ EMSA#				
	EMS Unit for response.					
Numerator Data Source	<ul><li>EMS Dispatch Center Record</li><li>PSAP Records</li></ul>	ds				

	□ EMS Provider Records			
Description of Indicator Formula		numerator value (N) shown p	er 2	4 hour denominator value (D)
Indicator Formula Numeric Expression		(N) EMS calls effected per (D	)-24)	hour period.
Linkage	Lir	nkage Options	EM	ISA Data Elements
		EMS Dispatch Center Identifier Scene Address Response Unit Time of Call	0	EMSA # EMSA # EMSA #
Stratification		Options		EMSA Data Elements
		by EMS Dispatch Center by Hour by Incident type by Responding unit		EMSA # EMSA # EMSA # EMSA#
Indicator Exclusion Criteria	<ul> <li>Calls where EMS service not requested</li> <li>Calls not received by PASP or emergency phone line</li> <li>Calls where EMS Response Unit not notified</li> </ul>			
References		<ul> <li>American Heart Association. Circulation, 2000; 102: Suppl.1</li> <li>Clawson J: Regulations and standards for emergency medical dispatchers; a model for state or region, Emergency medical Services 13:4, 1984</li> <li>Clawson, J.J (1989, May-June). Emergency Medical Dispatching. Prehospital and Disaster Medicine, p. 125-152</li> <li>Davis, C. 1998, May-June). Touring Americas PSAP's: US Communication Centers. 9-1-1 Magazine, 52</li> <li>Gilbert, S. (1998, July-August). Pathway management – Back to basics. 9-1-1 magazine, 64</li> <li>National Emergency Number Assn (1999). How 911 works. On-Line <a href="https://www.nena911.org">www.nena911.org</a>.</li> <li>Stratton, S: Triage by emergency medical dispatchers, Prehospital Disaster Medicine 7:379, 1992</li> </ul>		
Source	□ California EMSA Vision Project 2002			

CORE INDICATOR	ACCESS & UTILIZATION		
INDEX # AC3C	Lanca Timor First Ding to Call Dick Un		
Measure	Lapse Time: First Ring to Call Pick Up Emergency Medical Dispatch Center		
CORE INDICATOR REF	SYSTEM OPERATIONS		
#AC2	ACCESS & UTILIZATION		
Objective	□ to measure the average lapse time in minutes + seconds from	<b>1</b>	
	the beginning of first ring to call pick up for all calls for EMS		
	services which are received by a EMS Dispatch Center		
Classification	□ System Operations - Access		
Type of Measure  Domain of Performance	□ Process □ Efficiency		
Indicator Reporting Value	□ Efficiency □ Average time in Minutes + Seconds		
Display Format	Cube Chart		
Display Format	□ Line Graph		
	□ Process Control Chart		
Frequency of Display	☐ Monthly x 12		
Measures of Central	□ mean - Yes		
Tendency	mode - Yes		
	uriance - Yes		
Trending Analysis	□ standard deviation - Yes □ Yes		
Minimum Data Values	□ 30 values per measure		
Sampling	Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)	□ the total number of calls received by EMS Dispatch Center		
	where a request for EMS services is accepted		
Denominator	Inclusion Criteria EMSA Data Elements		
	□ All calls received by a EMS □ EMSA#		
	Dispatch Center where		
	there is a   EMSA#		
	request for EMS Services		
	□ All Calls reviewed during a specified period of time. □ EMSA#\		
	□ Specified period of time;		
	i.e. 1 month, year, etc. time		
	must be the same for		
	numerator data		
Damani da Dai 2	EMO Dispertal Court D		
Denominator Data Source	<ul><li>EMS Dispatch Center Records</li><li>PSAP Records</li></ul>		
	□ PSAP Records □ EMS Provider Records		
Population Subset	□ Total aggregate number when lapsed times from each call are		
Numerator (N)	all added together.	-	
Numerator	Inclusion Criteria EMSA Data Elements		
	□ All lapse times from first □ EMSA #		
	ring to call pick up		
	□ Calls received by EMS □ EMSA #		
	Dispatch Center		
	□ calls where caller request EMS services □ EMSA #		
	□ Specified period of time; □ EMSA #		
	i.e. 1 month, year, etc. time		

		must be the same for		
Numerator Data Source		numerator data	۷-	
Numerator Data Source		EMS Dispatch Center Record PSAP Records	JS	
		EMS Provider Records		
Description of Indicator	0		_ 4:	and added to eather (NI) man
Description of Indicator Formula		numerator value total of laps		
Indicator Formula		number of calls received by EMS Dispatch Center (D)		
Numeric Expression	_	(N) total time in minutes + seconds per total calls received per		
Linkage	Lie	(D-24) hour period.	EN	ISA Data Elements
Lilikage		EMS Dispatch Center		EMSA #
	_	Identifier		EMSA #
		Scene Address		EMSA #
		Response Unit		EMSA #
		Time of Call	_	
Stratification		Options		EMSA Data Elements
		by EMS Dispatch Center		EMSA #
		by Time of Day		EMSA #
		by Incident type		EMSA #
		by Responding unit		EMSA#
Indicator Exclusion Criteria				
		Calls not received by emerge		
References				Circulation, 2000; 102: Suppl.1
				standards for emergency
				I for state or region, Emergency
		medical Services 13:4, 1		
		• Clawson, J.J (1989, May		
				Disaster Medicine, p. 125-152
				Fouring Americas PSAP's: US
		Communication Centers		•
				t). Pathway management –
		Back to basics. 9-1-1 ma	_	
		<ul> <li>National Emergency Nur On-Line <a href="https://www.nena911.o">www.nena911.o</a></li> </ul>		Assn (1999). How 911 works.
		· · · · · · · · · · · · · · · · · · ·	_	anay madiaal dianatahara
		<ul> <li>Stratton, S: Triage by emergency medical dispatchers,</li> <li>Prehospital Disaster Medicine 7:379, 1992</li> </ul>		
Source		California EMSA Vision Proje		
Source	T	Camorna Livion vision Fluje	JUL 2	.002

CORE INDICATOR INDEX # AC3D	ACCESS & UTILIZATION	
Measure	<b>Emergency Medical Disp</b>	atch Center
CORE INDICATOR REF #AC2	SYSTEM OPERATIONS ACCESS & UTILIZATION	
Objective	□ to measure the average lap	se time in minutes + seconds from
		by a EMS Dispatch Center until the or broadcast and acknowledged) by
	a responding EMS unit.	G , ,
Classification	System Operations - Acces	S
Type of Measure  Domain of Performance	□ Process □ Efficiency	
Indicator Reporting Value	☐ Average time in Minutes + S	Seconds
Display Format	□ Cube Chart	70001140
• •	☐ Line Graph	
	□ Process Control Chart	
Frequency of Display	☐ Monthly x 12	
Measures of Central Tendency	□ mean - Yes □ mode - Yes	
rendency	variance - Yes	
	standard deviation - Yes	
Trending Analysis	□ Yes	
Minimum Data Values	□ 30 values per measure	
Sampling	□ Periodic - Rate	
Aggregation	□ Yes	
Blinded	☐ Yes	
Beta Testing Population Denominator (D)	<ul><li>None to Date</li><li>the total number of 911 calls</li></ul>	s received by EMS Dispatch Center
Population Denominator (D)	where a request for EMS se	
Denominator	Inclusion Criteria	EMSA Data Elements
	□ All calls received by a EMS	□ EMSA#
	Dispatch Center where there is a	□ EMSA#
	request for EMS Services	d LIVIOA#
	☐ All Calls reviewed during a	□ EMSA#\
	specified period of time.	
	□ Specified period of time;	
	i.e. 1 month, year, etc. time must be the same for	□ EMSA#\
	numerator data	
	numerator data	
Denominator Data Source	□ EMS Dispatch Center Reco	rds
	□ PSAP Records	
	□ EMS Provider Records	
Population Subset Numerator (N)	<ul> <li>I ofal aggregate number wh effected is all added together</li> </ul>	en lapsed times from each EMS call er.
Numerator	Inclusion Criteria	EMSA Data Elements
	□ All lapse times from first	□ EMSA#
	ring to call pick up	
	□ Calls received by EMS	□ EMSA#
	Dispatch Center	□ EMSA#
	<ul><li>calls where caller request EMS services</li></ul>	□ EMSA#
	☐ Specified period of time;	□ EMSA#
	i.e. 1 month, year, etc. time	

		must be the same for		
		numerator data		
Numerator Data Source		EMS Dispatch Center Record	ds	
		PSAP Records		
		EMS Provider Records		
Description of Indicator		numerator value total of laps		
Formula		number of calls received by I		
Indicator Formula			cond	ds per total calls received per
Numeric Expression		(D-24) hour period.		
Linkage	Lir	kage Options	EN	ISA Data Elements
		EMS Dispatch Center		EMSA #
		Identifier		EMSA #
		Scene Address		EMSA#
		Response Unit		EMSA #
		Time of Call		
Stratification		Options		EMSA Data Elements
		by EMS Dispatch Center		EMSA #
		by Time of Day		EMSA #
		by Incident type		EMSA #
		by Responding unit		EMSA#
Indicator Exclusion Criteria		Calls where EMS service no		
		Calls not received by emerge	•	
References				Circulation, 2000; 102: Suppl.1
				standards for emergency
				I for state or region, Emergency
		medical Services 13:4, 1		
		<ul> <li>Clawson, J.J (1989, May</li> </ul>		
				Disaster Medicine, p. 125-152
				Touring Americas PSAP's: US
		Communication Centers		_
				t). Pathway management –
		Back to basics. 9-1-1 ma		
				r Assn (1999). How 911 works.
		On-Line <u>www.nena911.o</u>		
				ency medical dispatchers,
		Prehospital Disaster Med		
Source		California EMSA Vision Proje	ect 2	2002

Core Indicator Index # BH1A	BASE HOSPITALS	
Measure	Base Hospitals per Response	Area
CORE INDICATOR REF	SYSTEM OPERATIONS  BASE HOSPITALS – MEDICAL	CONTROL
Objective	□ to measure the number of de	signated base hospitals serving a
Classification	specific-geographic EMS res  System operations – medical	
Type of Measure	□ Structural	oona oi
Domain of Performance	□ Component	
Indicator Reporting Value	□ %	
Display Format	□ List	
	□ Cube Chart	
Francisco of Display	Geo Map	
Frequency of Display Measures of Central	<ul><li>□ Monthly x 12</li><li>□ mean - No</li></ul>	
Tendency	□ mode - No	
rendency	□ variance - No	
	□ standard deviation - No	
Trending Analysis	□ NA	
Minimum Data Values	1 values per measure	
Sampling	□ Periodic - Rate	
Aggregation	□ Yes	
Blinded	□ Yes	
Beta Testing	□ None to Date	A 16' 11 1
Population Denominator (D)	the designated geographic re EMS authority a specific EMS	esponse area. Area defined by local S response area.
Denominator	Inclusion Criteria	EMSA Data Elements
	<ul> <li>Specific geographic area designated as an EMS</li> </ul>	□ EMSA#
	response area.	
Denominator Data Source	□ LEMSA	
	<ul><li>Designated Base Hospital</li><li>EMS Service Provider</li></ul>	
Population Subset	_	ed base hospitals located within the
Numerator (N)	response area as defined in	
Numerator	Inclusion Criteria	EMSA Data Elements  □ EMSA#
	<ul> <li>Base Hospitals as designated by the local</li> </ul>	□ EMSA#
	EMS Authority	
	<ul> <li>Hospitals that function in a on-line medical control</li> </ul>	
	capacity	
Numerator Data Source	□ LEMSA	
	<ul> <li>Designated Base Hospital</li> </ul>	
	□ EMS Service Provider	
Description of Indicator Formula	□ NA	
Indicator Formula	□ NA	
	<b>–</b> 100	
Numeric Expression		
	Linkage Ontions	FMSA Data Flements
Numeric Expression  Linkage	Linkage Options	EMSA Data Elements  □ EMSA #

		□ EMSA#	
Indicator Exclusion Criteria	00	non-designated hospitals non-designated EMS response areas	
References		<ul> <li>Neely KW et al: The effect of base hospital conta ambulance destination, Ann of Emerg Med 19:9 1990</li> <li>Holroyd B, Knopp R, Kallsen G: Medical control: assurance in Prehospital care, JAMA 256(8): 10 1986</li> <li>National Highway Traffic Safety Administration a resources and Services Administration. (2000). Ather Future; a systems approach. Washington D.</li> </ul>	06-909, : quality :27-1031, and Health Agenda for
Source		California EMSA Vision Project	

Core Indicator Index # BH1B	BASE HOSPITALS		
Measure	Caseloads per 24 hrs - Base H	<u>ospitals</u>	
CORE INDICATOR REF #BH1	SYSTEM OPERATIONS BASE HOSPITALS – MEDICAL	CONTROL	
Objective		ber of calls made to a designated ntrol service during a 24-hour	
	period.	-	
Classification Type of Measure	<ul><li>System operations – medica</li><li>Process</li></ul>	I control	
Domain of Performance	□ Component		
Indicator Reporting Value	<ul> <li>Average number of calls per</li> </ul>	24 hr	
Display Format	□ List		
	□ Cube Chart		
Frequency of Display	☐ Monthly x 12		
Measures of Central	mean - Yes		
Tendency	<ul><li>□ mode - No</li><li>□ variance - No</li></ul>		
	□ standard deviation - Yes		
Trending Analysis	☐ Yes		
Minimum Data Values	□ 30 values per measure		
Sampling	□ Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)	□ 24-hour period of time.		
Denominator	Inclusion Criteria	EMSA Data Elements	
	□ Specific 24 hours	□ EMSA#	
Denominator Data Source	<ul><li>LEMSA</li><li>Designated Base Hospital</li></ul>		
Population Subset Numerator (N)	the number of EMS calls for medical control service made to a designated base hospital		
Numerator	Inclusion Criteria	EMSA Data Elements	
	<ul> <li>Base Hospitals as designated by the local EMS Authority</li> <li>Calls made to a designated base hospital to provide on-line medical control to a EMS service provider</li> </ul>	□ EMSA#	
Numerator Data Source	<ul><li>LEMSA</li><li>Designated Base Hospital</li></ul>		
Description of Indicator Formula	□ NA		
Indicator Formula	□ NA		
Numeric Expression			
Linkage	Linkage Options	EMSA Data Elements	
		□ EMSA#	
Stratification	Options	EMSA Data Elements	
	☐ By Time of Day	□ EMSA#	
	□ By Base Hospital	□ EMSA #	
	☐ By EMS Response Calls	□ EMSA#	
	□ By Chief Complaint	□ EMSA#	

	By Orders Given		EMSA #
Indicator Exclusion Criteria	non-designated Base Hospita		
	Calls not made to a designat	ed B	ase Hospital
References	Neely KW et al: The effe	ct of	base hospital contact on
	ambulance destination, A	Ann c	of Emerg Med 19:906-909,
			G: Medical control: quality e, JAMA 256(8): 1027-1031,
		Admi	ty Administration and Health nistration. (2000). Agenda for ch. Washington D.C
Source	California EMSA Vision Proje	ect	

Core Indicator Index # BH1C	BA	SE HOSPITALS	
Measure	Cas	seloads per Authorized Pers	sonnel - Base Hospital
CORE INDICATOR REF #BH1		<b>STEM OPERATIONS</b> SE HOSPITALS – MEDICAL (	CONTROL
Objective			ber of calls made to a designated
			ntrol per number of Authorized
		personnel on duty to answer	
Classification		System operations – medical	l control
Type of Measure		Structural	
Domain of Performance		Component	Authorized On Duty Devended
Indicator Reporting Value Display Format		List	Authorized On-Duty Personnel
Display I offilat		Cube Chart	
	_	Line Graph	
Frequency of Display		Monthly x 12	
Measures of Central		mean - Yes	
Tendency		mode - No	
		variance - No	
Total Park And Laboratoria		standard deviation - Yes	
Trending Analysis Minimum Data Values		Yes	
Sampling		30 values per measure Periodic - Rate	
Aggregation		Yes	
Blinded	<u> </u>	Yes	
Beta Testing		None to Date	
Population Denominator (D)			d Personnel over a specified period
. ,		of time which is the same tim	
Denominator	Inc	lusion Criteria	EMSA Data Elements
		Personnel Authorized by	□ EMSA#
		local EMS Authority to	
		accept EMS calls and	
		accept EMS calls and provide medical control	D FMCA#
		accept EMS calls and provide medical control Personnel on-duty and	□ EMSA#
	_	accept EMS calls and provide medical control Personnel on-duty and available to respond	□ EMSA#
	_	accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at	□ EMSA#
Denominator Data Source		accept EMS calls and provide medical control Personnel on-duty and available to respond	□ EMSA#
Denominator Data Source		accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at designated base hospital LEMSA Designated Base Hospital	
Population Subset		accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at designated base hospital LEMSA Designated Base Hospital the number of EMS calls for	medical control service made to a
	0	accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at designated base hospital LEMSA Designated Base Hospital the number of EMS calls for designated base hospital ov	medical control service made to a er a specified period of time which
Population Subset Numerator (N)		accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at designated base hospital LEMSA  Designated Base Hospital the number of EMS calls for designated base hospital ov is the same time as defined i	medical control service made to a er a specified period of time which n denominator
Population Subset	lnc	accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at designated base hospital LEMSA Designated Base Hospital the number of EMS calls for designated base hospital ov is the same time as defined integral.	medical control service made to a er a specified period of time which n denominator  EMSA Data Elements
Population Subset Numerator (N)		accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at designated base hospital LEMSA Designated Base Hospital the number of EMS calls for designated base hospital ov is the same time as defined ilusion Criteria  Base Hospitals as	medical control service made to a er a specified period of time which n denominator
Population Subset Numerator (N)	lnc	accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at designated base hospital LEMSA Designated Base Hospital the number of EMS calls for designated base hospital ov is the same time as defined ilusion Criteria  Base Hospitals as designated by the local	medical control service made to a er a specified period of time which n denominator  EMSA Data Elements   EMSA#
Population Subset Numerator (N)	lnc	accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at designated base hospital LEMSA Designated Base Hospital the number of EMS calls for designated base hospital ov is the same time as defined ilusion Criteria  Base Hospitals as	medical control service made to a er a specified period of time which n denominator  EMSA Data Elements  □ EMSA#
Population Subset Numerator (N)	Inc	accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at designated base hospital LEMSA Designated Base Hospital the number of EMS calls for designated base hospital ov is the same time as defined in the same time as defined in the same time as designated by the local EMS Authority Calls made to a designated base hospital to provide	medical control service made to a er a specified period of time which n denominator  EMSA Data Elements   EMSA#
Population Subset Numerator (N)	Inc	accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at designated base hospital LEMSA Designated Base Hospital the number of EMS calls for designated base hospital ov is the same time as defined in the same time as designated by the local EMS Authority Calls made to a designated base hospital to provide on-line medical control to a	medical control service made to a er a specified period of time which n denominator  EMSA Data Elements   EMSA#
Population Subset Numerator (N) Numerator	Inc	accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at designated base hospital LEMSA Designated Base Hospital the number of EMS calls for designated base hospital ov is the same time as defined in the same time as defined in the same time as designated by the local EMS Authority Calls made to a designated base hospital to provide on-line medical control to a EMS service provider	medical control service made to a er a specified period of time which n denominator  EMSA Data Elements   EMSA#
Population Subset Numerator (N)	Inc	accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at designated base hospital LEMSA Designated Base Hospital the number of EMS calls for designated base hospital ov is the same time as defined ilusion Criteria  Base Hospitals as designated by the local EMS Authority Calls made to a designated base hospital to provide on-line medical control to a EMS service provider	medical control service made to a er a specified period of time which n denominator  EMSA Data Elements   EMSA#
Population Subset Numerator (N)  Numerator  Numerator  Numerator Data Source	Inc	accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at designated base hospital LEMSA Designated Base Hospital the number of EMS calls for designated base hospital ov is the same time as defined ilusion Criteria  Base Hospitals as designated by the local EMS Authority Calls made to a designated base hospital to provide on-line medical control to a EMS service provider  LEMSA Designated Base Hospital	medical control service made to a er a specified period of time which n denominator  EMSA Data Elements   EMSA#
Population Subset Numerator (N)  Numerator  Numerator Data Source  Description of Indicator	Inc	accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at designated base hospital LEMSA Designated Base Hospital the number of EMS calls for designated base hospital ov is the same time as defined ilusion Criteria  Base Hospitals as designated by the local EMS Authority Calls made to a designated base hospital to provide on-line medical control to a EMS service provider	medical control service made to a er a specified period of time which n denominator  EMSA Data Elements   EMSA#
Population Subset Numerator (N)  Numerator  Numerator  Numerator Data Source	Inc	accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at designated base hospital LEMSA Designated Base Hospital the number of EMS calls for designated base hospital ov is the same time as defined ilusion Criteria  Base Hospitals as designated by the local EMS Authority Calls made to a designated base hospital to provide on-line medical control to a EMS service provider  LEMSA Designated Base Hospital	medical control service made to a er a specified period of time which n denominator  EMSA Data Elements   EMSA#
Population Subset Numerator (N)  Numerator  Numerator Data Source  Description of Indicator Formula		accept EMS calls and provide medical control Personnel on-duty and available to respond immediately to calls at designated base hospital LEMSA Designated Base Hospital the number of EMS calls for designated base hospital ov is the same time as defined in	medical control service made to a er a specified period of time which n denominator  EMSA Data Elements   EMSA#

			EMSA #
Stratification	Options		EMSA Data Elements
	By Time of Day By Base Hospital		EMSA # EMSA #
	By EMS Response Calls By Chief Complaint By Orders Given		EMSA # EMSA # EMSA #
Indicator Exclusion Criteria	at designated base hospital.	ed E loca vaila	I EMS Authority to accept calls ble to respond immediately to
References	<ul> <li>Neely KW et al: The effect of base hospital contact on ambulance destination, Ann of Emerg Med 19:906-909, 1990</li> <li>Holroyd B, Knopp R, Kallsen G: Medical control: quality assurance in Prehospital care, JAMA 256(8): 1027-1031, 1986</li> <li>National Highway Traffic Safety Administration and Health resources and Services Administration. (2000). Agenda for the Future; a systems approach. Washington D.C</li> </ul>		of Emerg Med 19:906-909,  G: Medical control: quality e, JAMA 256(8): 1027-1031,  ety Administration and Health inistration. (2000). Agenda for
Source	· · · .		

Core Indicator	BASE HOSPITALS		
Index # BH1D			
Measure	Lapse Time to Call Pick Up - Ba	ase Hospitals	
CORE INDICATOR REF	SYSTEM OPERATIONS		
#BH1	BASE HOSPITALS - MEDICAL (	CONTROL	
Objective	to measure the average lapse in time in minutes + seconds from first ring (phone or radio) to call pick up at a designated base hospital when a request for medical control direction is serving a specific-geographic EMS response area.		
Classification	☐ System operations – medical	control	
Type of Measure	□ Process		
Domain of Performance	□ Component		
Indicator Reporting Value	□ Average Minutes + Seconds	call Pick Up Tme	
Display Format	□ Cube Chart □ Line Graph □ Process Control Chart		
Frequency of Display	☐ Monthly x 12		
Measures of Central Tendency	<ul> <li>mean - Yes</li> <li>mode - No</li> <li>variance - No</li> <li>standard deviation - Yes</li> </ul>		
Trending Analysis	□ Yes		
Minimum Data Values	□ 30 values per measure		
Sampling	□ Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)	the total number of calls (phone or radio) received by a designated base hospital during a specified time period that is the same as defined in numerator		
Denominator	Inclusion Criteria	EMSA Data Elements	
	<ul> <li>All calls received (phone or radio) by designated base hospital for medical control services.</li> </ul>	□ EMSA# □ EMSA#	
Denominator Data Source	□ LEMSA □ Designated Base Hospital □ EMS Service Provider		
Population Subset Numerator (N)	the lapse of time measured in minutes + seconds from first ring/alert (phone or radio) to the time when communication device is picked up for response. The lapsed times covering a		

	specific period of time that is the same as defined by denominator shall be added together to obtain one aggregated number.		
Numerator	Inclusion Criteria	EMSA Data Elements	
	<ul> <li>All calls received by a designated base hospital as a request for medical control services.</li> <li>Hospitals that function in a on-line medical control capacity</li> </ul>	□ EMSA#	
Numerator Data Source	<ul><li>□ LEMSA</li><li>□ Designated Base Hospital</li><li>□ EMS Service Provider</li></ul>		
Description of Indicator Formula	numerator value (N) divided by denominator (D) = Average Call Pick Up Time		
Indicator Formula	□ N/D = Average Call Pick Up Time  Base Hospital		
Numeric Expression			
Linkage	Linkage Options EMSA Data Elements		
		□ EMSA#	
Stratification	Options	EMSA Data Elements	
	□ By Hospital □ By Call Type □ By Time of Day □	□ EMSA# □ EMSA#	
Indicator Exclusion Criteria	<ul><li>non-designated base hospita</li><li>calls where medical control s</li></ul>		
References	<ul> <li>Neely KW et al: The effect of base hospital contact on ambulance destination, Ann of Emerg Med 19:906-909, 1990</li> <li>Holroyd B, Knopp R, Kallsen G: Medical control: quality assurance in Prehospital care, JAMA 256(8): 1027-1031, 1986</li> <li>National Highway Traffic Safety Administration and Health resources and Services Administration. (2000). Agenda for the Future; a systems approach. Washington D.C</li> </ul>		
Source	□ California EMSA Vision Project		

EMS		
:MS		
<ul><li>30 values per measure</li><li>Periodic - Rate</li></ul>		
□ Yes		
□ Yes		
□ None to Date		
□ the number of adult patients who suffer a pulseless VF or VT		
event unwitnessed by EMS personnel Inclusion Criteria EMSA Data Elements		
oital		
setting		
Inclusion Criteria     EMSA Data Elements       □ bystander CPR is     □ discharge status (TBD)		
ed		

Formula	by 100 equals percentage (%)					
Indicator Formula						
Numeric Expression						
Linkage	Lir	ıkage Options	EN	ISA Data Elements		
		name		EMSA #29		
		dob		EMSA #35		
		age		EMSA #36		
		gender		EMSA #38		
		admit date		EMSA#?		
		procedures		EMSA #73		
Stratification		Options		EMSA Data Elements		
		by age		EMSA #36		
		by gender		EMSA #38		
		by incident type		EMSA #8		
		by response times		EMSA #17-20		
		by scene times		EMSA #8		
		by number of defibrillations		EMSA #73 (99.62)		
		by provider level	_	5140A #05		
		P 0.1		EMSA #25		
Indicator Exclusion Criteria		· · · · · · · · · · · · · · · · · · ·				
		· · · · · · · · · · · · · · · · · · ·				
	_	personnel		I		
		<ul><li>event witnessed by EMS personnel</li></ul>				
Deference		Bystander CPR not performe		- On - V Or		
References		Utstein Model; Pitt, Penn Kas				
				Utstein Model applied to Rural-		
		Suburban EMS System. Ann				
		Wisconsin Study; Olson DW,				
		Wisconsin Experience; Ann Seattle Washington; Weaver				
	_	Improving Survival from Out				
		Ann of Emerg Med 15:10;118				
	_	Ontario, Canada; Brison RJ. Cardiac Arrest in Ontario; Can Med Assoc J; 191-199, 1992				
Source						
Jource	_	Samornia Livion Vision Floje				

CORE INDICATOR INDEX # CA1B	PULSELESS V-FIB or V-TACH - UNWITNESSED			
Measure	Defibrillation Performed by Bystander			
	Public Access Defibrillation (PAD)			
Objective	□ to measure % of patients wh	o have defibrillation performed by		
		ulseless ventricular fibrillation (VF)		
		T) event which is unwitnessed and		
Classification	treated by EMS personnel medical care - clinical			
Type of Measure	□ Process			
Domain of Performance	□ Frequency			
Indicator Reporting Value	□ %			
Display Format	□ Bar Chart			
	☐ Line Graph			
Frequency of Display	<ul><li>□ Process Control Chart</li><li>□ Monthly x 12</li></ul>			
Measures of Central	mean - Yes			
Tendency	□ mode - No			
	u variance - No			
	□ standard deviation - Yes			
Trending Analysis	□ NA			
Minimum Data Values	30 values per measure      Desirable Retained			
Sampling Aggregation	□ Periodic - Rate □ Yes			
Blinded	□ Yes			
Beta Testing	□ None to Date			
Population Denominator (D)	□ the number of adult patients who suffer a pulseless VF or VT			
	event unwitnessed by EMS personnel			
Denominator	Inclusion Criteria	EMSA Data Elements		
	patient has reached age 15	□ EMSA #36		
	patient has suffered a VF	□ EMSA #54VTAC. 54VFIB		
	or VT event) □ patient was pulseless	☐ EMSA #54VTAC, 54VFIB☐ EMSA #54C-A		
	(patient VF or VT	a Elvior none r		
	event was in prehospital	□ EMSA #54		
	setting	- FMOA #50		
	patient VF & VT event was not witnessed by EMS	□ EMSA #52		
	personnel			
	□ specified time period	□ EMSA #11		
Denominator Data Source	□ EMS Medical Records			
Population Subset	D the number of notice to what	receive defibrillation performed by		
Numerator (N)	the number of patients who lay person	receive delibriliation performed by		
Numerator	Inclusion Criteria	EMSA Data Elements		
	□ defibrillation performed by	□ EMSA#		
	lay public (professional or			
	non-professional) prior to			
		arrival of on-duty EMS		
Numerator Data Source	personnel			
Description of Indicator	<ul><li>□ EMS Medical Records</li><li>□ numerator value (N) divided by denominator value (D) multiplied</li></ul>			
Formula	by 100 equals percentage (%)			
Indicator Formula	□ N / D = %			

Numeric Expression				
Linkage	Linkage Options	EMSA Data Elements		
	□ name	□ EMSA #29		
	□ dob	□ EMSA #35		
	□ age	■ EMSA #36		
	□ gender	□ EMSA #38		
	<ul><li>admit date</li></ul>	□ EMSA#?		
	procedures	□ EMSA #73		
Stratification	Options	EMSA Data Elements		
	□ by age	□ EMSA #36		
	by gender	□ EMSA #38		
	<ul><li>by incident type</li></ul>	□ EMSA #8		
	<ul><li>by response times</li></ul>	□ EMSA #17-20		
	<ul><li>by scene times</li></ul>	□ EMSA #8		
	<ul><li>by provider level</li></ul>	□ EMSA #73 (		
Indicator Exclusion Criteria	□ non-cardiac etiologies,			
		scitation was not attempted by		
	EMS personnel			
	<ul><li>event witnessed by EMS per</li></ul>			
	<ul><li>Defib performed on-duty EM</li></ul>			
		patient has not survived to hospital discharge		
References	1 ' '			
	ı ·	he Utstein Model applied to Rural-		
		Suburban EMS System. Ann of Emerg Med; 12:17-20, 1994		
		, , , , , , , , , , , , , , , , , , ,		
	•	Wisconsin Experience;. Ann of Emerg Med, 18:8;806. 1989		
		Improving Survival from Out of Hospital Cardiac Arrest.		
	Ann of Emerg Med 15:10;118			
		Cardiac Arrest in Ontario; Can Med		
		Assoc J; 191-199, 1992		
Source	<ul><li>California EMSA Vision Proje</li></ul>	ect		

CORE INDICATOR INDEX # CA1C	PULSELESS V-FIB or V-T	ACH - UNWITNESSED	
Measure	Automatic External Defibrillation (AED) Performed by EMS Personnel		
CORE INDICATOR REF	CARDIAC - ADULT		
#CA1	TREATMENT PROTOCOL UTIL		
Objective	<ul> <li>to measure % of patients who receive defibrillation by automatic or semi-automatic external defibrillator and performed by on- duty EMS personnel</li> </ul>		
Classification	□ medical care - clinical		
Type of Measure	□ Process		
Domain of Performance	□ Patient Care		
Indicator Reporting Value Display Format	□ % □ List		
Display Format	☐ Cube Chart		
	□ Bar Chart		
	□ Line Graph		
	□ Process Control Chart		
Frequency of Display	☐ Monthly x 12		
Measures of Central	mean - Yes		
Tendency	□ mode - No □ variance - No		
	□ variance - No □ standard deviation - Yes		
Trending Analysis	NA		
Minimum Data Values	□ 30 values per measure		
Sampling	□ Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)	the number of adult patients who suffer a pulseless VF or VT		
Denominator	event unwitnessed by EMS   Inclusion Criteria	EMSA Data Elements	
Denominator	morasion officia	LINOA Data Elements	
	<ul><li>patient has reached age 15</li></ul>	□ EMSA #36	
	□ patient has suffered a VF		
	or VT event) □ patient was pulseless	□ EMSA #54VTAC, 54VFIB	
	patient was pulseless (patient VF or VT	□ EMSA #54C-A	
	<ul><li>event was in prehospital setting</li></ul>	□ EMSA #54	
	<ul><li>patient VF &amp; VT event was not witnessed by EMS</li></ul>	□ EMSA #52	
	personnel  specified time period	□ EMSA #11	
Denominator Data Source	EMS Medical Records	a EMON#II	
Population Subset	<ul><li>defibrillation by automatic or</li></ul>	semi-automatic external defibrillator	
Numerator (N)	and performed by on-duty E		
Numerator	Inclusion Criteria	EMSA Data Elements	
	<ul><li>patients who survive to hospital discharge</li></ul>	□ discharge status ( <b>TBD</b> )	
Numerator Data Source	□ EMS Medical records		
Description of Indicator Formula	numerator value (N) divided by denominator value (D) multiplied by 100 equals percentage (%)		
Indicator Formula Numeric Expression	□ N/D=%		

Linkage	Lir	nkage Options	EN	ISA Data Elements
		name		EMSA #29
		dob		EMSA #35
		age		EMSA #36
		gender		EMSA #38
		admit date		EMSA # ?
		procedures		EMSA #73
Stratification		Options		EMSA Data Elements
		by age		EMSA #36
		by gender		EMSA #38
		by incident type		EMSA #8
		by response times		EMSA #17-20
		by scene times		EMSA #8
		by provider level		EMSA #73
Indicator Exclusion Criteria		· · · · · · · · · · · · · · · · · · ·		
		a cardiac etiologies where resuscitation was not attempted by		
		EMS personnel		
		use of manual defibrillator		
		defib performed by lay public		
		event witnessed by EMS per		
		patient has not survived to he		
References				
		Prehospital Cardiac Arrest: The Utstein Model applied to Rural-		
		Suburban EMS System. Ann of Emerg Med; 12:17-20, 1994		
		,		
		Wisconsin Experience;. Ann of Emerg Med, 18:8;806. 1989		
		Improving Survival from Out of Hospital Cardiac Arrest.		
		Ann of Emerg Med 15:10;118		
		Ontario, Canada; Brison RJ. Cardiac Arrest in Ontario; Can Med		
		Assoc J; 191-199, 1992		
Source		California EMSA Vision Proje	ect	

CORE INDICATOR INDEX # CA1D	PULSELESS V-FIB or V-TACH - UNWITNESSED			
Measure	Lapse of Time to First Shock 10 mins or less			
CORE INDICATOR REF #CA1	CARDIAC - ADULT TREATMENT PROTOCOL UTILIZATION PULSELESS V-FIB V-TACH - UNWITNESSED			
Objective	□ to measure % of patients who receive defibrillation in 10 minutes or less from the estimated time of onset for a pulseless V-Fib/Tach event			
Classification	□ medical care - clinical			
Type of Measure	□ process			
Domain of Performance	<ul><li>Patient Care</li></ul>			
Indicator Reporting Value	□ %			
Display Format	Cube Chart			
	Bar Chart			
	<ul><li>□ Line Graph</li><li>□ Process Control Chart</li></ul>			
Frequency of Display	□ Monthly x 12			
Measures of Central	mean - Yes			
Tendency	□ mode - No			
	□ variance - No			
	standard deviation - No			
Trending Analysis	□ NA			
Minimum Data Values	□ 30 values per measure			
Sampling	□ Periodic - Rate			
Aggregation	□ Yes			
Blinded	□ Yes			
Beta Testing Population Denominator (D)	<ul><li>None to Date</li><li>the number of adult patients who suffer a pulseless VF or VT</li></ul>			
Fopulation Denominator (D)	event not witnessed by EMS personnel			
Denominator	Inclusion Criteria EMSA Data Elements			
	□ patient has reached age 15 □ EMSA #36	3		
	□ patient has suffered a VF			
		IVTAC, 54VFIB		
	□ patient was pulseless □ EMSA #54	IC-A		
	(patient VF or VT			
	event was in prehospital EMSA #54 setting	1		
	□ patient VF & VT event was □ EMSA #52	2		
	not witnessed by EMS			
	personnel			
Denominator Data Source	□ specified time period □ EMSA #11 □ EMS Medical Records			
Denominator Data Source	EIVIS Medical Records			
Population Subset	☐ the number of patients who receive shock wi	thin 10 mins or less		
Numerator (N)	from estimated time of onset for pulseless V-Fib/Tach event.			
Numerator	Inclusion Criteria EMSA Data E			
	□ patients who receive first defibrilatory shock within 10 mins or less □ estimated time of onset is dependent upon the best □ EMSA#			
	subjective assessment or evidence as witnessed by			

		EMS personnel on scene.			
Numerator Data Source		EMS Medical Records			
Description of Indicator		numerator value (N) divided by denominator value (D) multiplied			
Formula		by 100 equals percentage (%	6)		
Indicator Formula		N / D = %			
Numeric Expression					
Linkage	Lir	kage Options	EN	ISA Data Elements	
		name		EMSA #29	
		dob		EMSA #35	
		age		EMSA #36	
		gender		EMSA #38	
		admit date		EMSA # ?	
		procedures		EMSA #73	
Stratification		Options		EMSA Data Elements	
		by age		EMSA #36	
		by gender		EMSA #38	
		by incident type		EMSA #8	
		by response times		EMSA #17-20	
		by scene times		EMSA #8	
		by provider level		EMSA #	
Indicator Exclusion Criteria		non-cardiac etiologies,			
		cardiac etiologies where resu	ıscit	ation was not attempted by	
		EMS personnel			
		Time to shock greater than 10 mins			
		event witnessed by EMS per			
		patient has not survived to he			
References		Utstein Model; Pitt, Penn Kass LE. One Year Survival after			
				Utstein Model applied to Rural-	
		Suburban EMS System. Ann of Emerg Med; 12:17-20, 1994			
		Wisconsin study; Olson DW,			
	_	Wisconsin Experience;. Ann			
		Seattle Washington; Weaver			
	_	Improving Survival from Out			
		Ann of Emerg Med 15:10;118			
		Ontario, Canada; Brison RJ. Cardiac Arrest in Ontario; Can Med			
		Assoc J; 191-199, 1992			
Source		California EMSA Vision Proje	ect		

CORE INDICATOR Index # CA1E	PULSELESS V-FIB/TACH U	NWITNESSED		
Measure	Prehospital Defibrillation: Frequency of Administration			
CORE INDICATOR REF	CARDIAC - ADULT			
#CA1		TREATMENT PROTOCOL UTILIZATION		
Objective	□ to measure % of patients suffering a pulseless ventricular			
		lar tachycardia (VT) event, which is, one or more defibrillatory shocks in		
	pre-hospital setting.	one of more denominatory shocks in		
Classification	Medical care - clinical			
Type of Measure	□ Process			
Domain of Performance	☐ Frequency, Compliance			
Indicator Reporting Value	□ %			
Display Format	List Chart			
	☐ Cube Chart☐ Bar Chart			
	☐ Line Graph			
	☐ Process Control Chart			
Frequency of Display	☐ Monthly x 12			
Measures of Central	□ mean - Yes			
Tendency	mode - No			
	□ variance - No			
Trending Analysis	standard deviation - No  NA			
Minimum Data Values	□ 30 values per measure			
Sampling	Periodic - Rate			
Aggregation	□ Yes			
Blinded	□ Yes			
Beta Testing	□ None to Date			
Population Denominator (D)		ts treated by EMS personnel for		
Denominator	pulseless V-Fib/Tach unw Inclusion Criteria	EMSA Data Elements		
Denominator				
	patient has reached age 1	5 🗖 EMSA#		
	<ul> <li>patient treated by EMS personnel for pulseless V-</li> </ul>	· □ EMSA#		
	Fib/Tach.	□ EMSA #		
	□ Event is unwitnessed by			
	EMS personnel	□ EMSA #		
	<ul><li>event was in prehospital</li></ul>			
	setting	□ EMSA#		
Denominator Data Source	<ul><li>specified query time period</li><li>EMS Medical Records</li></ul>	ı		
Population Subset	•	o receive one or more defibrilatory		
Numerator (N)	shocks in the Prehospital			
Numerator	Inclusion Criteria	EMSA Data Elements		
	patients who receive shoot from any type of defib unit			
	patient who receive shock			
	from any provider; lay or			
	professional			
	patient's who are treated i	n		
	prehospital setting			
Numerator Data Source	□ EMS Medical Records			
Description of Indicator Formula	by 100 equals percentage	ed by denominator value (D) multiplied		
	i – ov iou equais percentage	(70)		

Indicator Formula Numeric Expression		N / D = %		
Linkage	Lir	nkage Options	EN	ISA Data Elements
		name		EMSA #
		dob		EMSA #
		age		EMSA #
		gender		EMSA #
		admit date		EMSA #
		procedures		EMSA #
Stratification		Options		EMSA Data Elements
		by age		EMSA #
		by gender		EMSA #
		by incident type		EMSA #
		by response times		EMSA #
		by scene times		EMSA #
		by provider level		EMSA #
Indicator Exclusion Criteria		non-cardiac etiologies,		V = 1 0 / = 1
		cardiac etiologies where puls		
		event was witnessed by EMS	•	
Defenses		event not treated by EMS pe		
References				
		Prehospital Cardiac Arrest: The Utstein Model applied to Rural-		
	L	Suburban EMS System. Ann of Emerg Med; 12:17-20, 1994		
		, , , , , , , , , , , , , , , , , , ,		
		Wisconsin Experience;. Ann of Emerg Med, 18:8;806. 1989 Seattle Washington; Weaver DW, MD. Considerations for		
	-	Improving Survival from Out		
		Ann of Emerg Med 15:10;118		•
				diac Arrest in Ontario; Can Med
	_	Assoc J; 191-199, 1992	Juit	alas / il sot ili silialis, sali iliou
Source		California EMSA Vision Proje	ect	

CORE INDICATOR INDEX # CA1F	PULSELESS V-FIB or V-T	PULSELESS V-FIB or V-TACH - UNWITNESSED		
Measure	Prehospital Defibrillation: Number of Shocks Delivered per Patient			
CORE INDICATOR REF	CARDIAC - ADULT			
#CA1	TREATMENT PROTOCOL UTIL	IZATION		
,, 6, (1	PULSELESS V-FIB V-TACH - U			
Objective		ber of shocks delivered per patient		
	after suffering a pulseless ve			
		event which is unwitnessed and		
Classification	treated by EMS personnel medical care - clinical			
Type of Measure	□ Process			
Domain of Performance	☐ Pt Care			
Indicator Reporting Value	□ %			
Display Format	□ List			
	□ Cube Chart			
	□ Bar Chart			
	<ul><li>□ Line Graph</li><li>□ Process Control Chart</li></ul>			
Frequency of Display	☐ Monthly x 12			
Measures of Central	mean - Yes			
Tendency	mode - No			
	□ variance - No			
	standard deviation - No			
Trending Analysis	□ NA			
Minimum Data Values	□ 30 values per measure			
Sampling	Periodic - Rate			
Aggregation Blinded	□ Yes			
Beta Testing	□ None to Date			
Population Denominator (D)	the number of adult patients who suffer a pulseless VF or VT			
( )	event unwitnessed by EMS p			
Denominator	Inclusion Criteria	EMSA Data Elements		
	<ul><li>patient has reached age 15</li><li>patient has suffered a VF</li></ul>	□ EMSA #36		
	or VT event)	□ EMSA #54VTAC, 54VFIB		
	<ul><li>patient was pulseless</li><li>(patient VF or VT)</li></ul>	□ EMSA #54C-A		
	<ul><li>event was in prehospital setting</li></ul>	□ EMSA #54		
	patient VF & VT event was not witnessed by EMS	□ EMSA #52		
	personnel	D EMSA #44		
Denominator Data Source	□ specified time period □ EMS Medical Records	□ EMSA #11		
Denominator Data Source	LINO Medical Records			
Population Subset Numerator (N)	u the number of shock delivered	ed.		
Numerator	Inclusion Criteria	EMSA Data Elements		
	☐ Shocks delivered by a any	□ EMSA#		
	type of defib unit			
	shocks delivered by any			
	person (professional or non-professional)			
	i iion-professional)	1		

		subset of denominator same time period as denominator		
Numerator Data Source		EMS Medical Records		
Description of Indicator Formula		numerator value (N) divided by 100 equals percentage (%)		enominator value (D) multiplied
Indicator Formula Numeric Expression		N / D = %	•	
Linkage	Lir	ıkage Options	EN	ISA Data Elements
		name		EMSA #29
		dob		EMSA #35
		age		EMSA #36
		gender		EMSA #38
		admit date		EMSA # ?
		procedures		EMSA #73
Stratification		Options		EMSA Data Elements
		by age		EMSA #36
		by gender		EMSA #38
		by incident type		EMSA #8
		by response times		EMSA #17-20
		by scene times		EMSA #8
		by provider level		EMSA #
Indicator Exclusion Criteria		non-cardiac etiologies,		
		cardiac etiologies where resu	ıscita	ation was not attempted by
		EMS personnel		
		event witnessed by EMS per		
D. C.		patient has not survived to he		
References		Utstein Model; Pitt, Penn Kas		
		Prehospital Cardiac Arrest: The Utstein Model applied to Rural-		
		Suburban EMS System. Ann of Emerg Med; 12:17-20, 1994		
		Wisconsin study; Olson DW, MD. EMT-Defibrillation: The Wisconsin Experience;. Ann of Emerg Med, 18:8;806. 1989		
		Seattle Washington; Weaver		
	_	Improving Survival from Out		
		Ann of Emerg Med 15:10;118		
				diac Arrest in Ontario; Can Med
	_	Assoc J; 191-199, 1992	Jail	and Arrest in Oritano, Gari Meu
Source		California EMSA Vision Proje	ect	

CORE INDICATOR INDEX # CA1G	PULSELESS V-FIB or V-TACH - UNWITNESSED		
Measure	Prehospital Defibrillation: Desired Effect Achieved		
CORE INDICATOR REF #CA1	CARDIAC - ADULT TREATMENT PROTOCOL UTILIZATION PULSELESS V-FIB V-TACH - UNWITNESSED		
Objective	effect from one or more defi setting	no achieve a desired therapeutic brillation shocks in the Prehospital	
Classification	medical care - clinical		
Type of Measure	□ outcome		
Domain of Performance	□ Effectiveness		
Indicator Reporting Value	□ %		
Display Format	<ul><li>□ Bar Chart</li><li>□ Line Graph</li></ul>		
Frequency of Display	☐ Monthly x 12		
Measures of Central	mean - Yes		
Tendency	□ mode - No □ variance - No		
	standard deviation - No		
Trending Analysis	□ NA		
Minimum Data Values	☐ 30 values per measure		
Sampling	□ Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)	the number of adult patients event unwitnessed and are s	who suffer a pulseless VF or VT	
Denominator	Inclusion Criteria	EMSA Data Elements	
Denominator Data Source	<ul> <li>patient has reached age 15</li> <li>patient has suffered a VF or VT event)</li> <li>patient was pulseless (patient VF or VT</li> <li>event was in prehospital setting</li> <li>patient VF &amp; VT event was not witnessed by EMS personnel</li> <li>pt was shocked by any type of defib unit</li> <li>patient was shocked one or more times</li> <li>specified time period</li> <li>EMS Medical Records</li> </ul>	<ul> <li>□ EMSA #36</li> <li>□ EMSA #54VTAC, 54VFIB</li> <li>□ EMSA #54C-A</li> <li>□ EMSA #54</li> <li>□ EMSA #52</li> <li>□ EMSA #11</li> </ul>	
Population Subset	the number of patients wher	re a desired effect is achieved from	
Numerator (N)	one or more shocks	o a aconca chect is achieved noill	
Numerator	Inclusion Criteria	EMSA Data Elements	
	<ul> <li>patient's who are treated in prehospital setting</li> <li>Desired effect is any change in patient status where there is full or partial</li> </ul>	□ discharge status ( <b>TBD)</b>	

		relief of symptoms		
		desired effect is reported		
		by EMS personnel through		
		observation, assessment		
		or by verbal questioning of		
		patient.		
Numerator Data Source		EMS Medical Records		
Description of Indicator		numerator value (N) divided l	by d	enominator value (D) multiplied
Formula		by 100 equals percentage (%	<b>6</b> )	
Indicator Formula		N / D = %		
Numeric Expression				
Linkage	Lir	kage Options	EN	ISA Data Elements
		name		EMSA #29
		dob		EMSA #35
		age		EMSA #36
		gender		EMSA #38
		admit date		EMSA#?
		procedures		EMSA #73
Stratification		Options		EMSA Data Elements
		by age		EMSA #36
		by gender		EMSA #38
		by incident type		EMSA #8
		by response times		EMSA #17-20
		by scene times		EMSA #8
		by number of defibrillations		EMSA #73 (99.62)
		by provider level		- (,
		, .		EMSA #25
Indicator Exclusion Criteria		non-cardiac etiologies,		
		cardiac etiologies where defi	b wa	as not attempted by EMS
		personnel		
		events where desired effect r	not a	achieved
		event witnessed by EMS per	sonr	nel
		patient has not survived to he		
References		Utstein Model; Pitt, Penn Kas	s Ll	E. One Year Survival after
		Prehospital Cardiac Arrest: T	he l	Utstein Model applied to Rural-
		Suburban EMS System. Ann	n of	Emerg Med; 12:17-20, 1994
		Wisconsin study; Olson DW,	MD	. EMT-Defibrillation: The
		Wisconsin Experience;. Ann		
		Seattle Washington; Weaver		
		Improving Survival from Out		
		Ann of Emerg Med 15:10;118		
		Ontario, Canada; Brison RJ.	Car	diac Arrest in Ontario; Can Med
		Assoc J; 191-199, 1992		•
Source		California EMSA Vision Proje	ect	

CORE INDICATOR Index # CA1H	PULSELESS V-FIB/TACH UNWITNESSED		
Measure	Epinephrine: Frequency of Adr	<u>ministration</u>	
CORE INDICATOR REF	CARDIAC - ADULT		
#CA1	TREATMENT PROTOCOL UTILI	IZATION	
Objective	•	fering from chest pain of suspected inephrine in pre-hospital setting.	
Classification	☐ Medical care - clinical		
Type of Measure	□ Process		
Domain of Performance	□ Frequency, Compliance		
Indicator Reporting Value	□ %		
Display Format	□ List Chart □ Cube Chart □ Bar Chart □ Line Graph □ Process Control Chart		
Frequency of Display	☐ Monthly x 12		
Measures of Central Tendency	□ mean - Yes □ mode - No □ variance - No □ standard deviation - No		
Trending Analysis	□ NA		
Minimum Data Values	□ 30 values per measure		
Sampling	□ Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)	the number of adult patients event - unwitnessed in Preho	who suffer a pulseless V-Fib/Tach spital setting	
Denominator	Inclusion Criteria	EMSA Data Elements	
	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for pulseless V-Fib/Tach.</li> <li>event was in prehospital setting</li> <li>specified query time period</li> </ul>	□ EMSA # □ EMSA # □ EMSA # □ EMSA #	

Denominator Data Source	□ EMS Medical Records		
Population Subset Numerator (N)	□ the number of patients who receive epinephrine		
Numerator	Inclusion Criteria	EMSA Data Elements	
	<ul> <li>patient's who are treated in prehospital setting</li> <li>patients who receive one or more doses of epinephrine</li> <li>subset of denominator</li> </ul>	□ EMSA#	
Numerator Data Source	□ EMS Medical Records		
Description of Indicator Formula	by 100 equals percentage (%	by denominator value (D) multiplied %)	
Indicator Formula	□ N/D=%		
Numeric Expression			
Linkage	Linkage Options	EMSA Data Elements	
	□ name □ dob □ age □ gender □ admit date □ procedures	□ EMSA #	
Stratification	Options	EMSA Data Elements	
	<ul> <li>□ by age</li> <li>□ by gender</li> <li>□ by incident type</li> <li>□ by response times</li> <li>□ by scene times</li> <li>□ by provider level</li> </ul>	□ EMSA #	
Indicator Exclusion Criteria	<ul> <li>non-cardiac etiologies,</li> <li>cardiac etiologies where patient not resuscitated by EMS personnel</li> <li>event witnessed by EMS personnel</li> <li>event not treated by EMS personnel</li> </ul>		
References	<ul> <li>Utstein Model; Pitt, Penn Kass LE. One Year Survival after Prehospital Cardiac Arrest: The Utstein Model applied to Rural-Suburban EMS System. Ann of Emerg Med; 12:17-20, 1994</li> <li>Wisconsin study; Olson DW, MD. EMT-Defibrillation: The Wisconsin Experience;. Ann of Emerg Med, 18:8;806. 1989</li> <li>Seattle Washington; Weaver DW, MD. Considerations for Improving Survival from Out of Hospital Cardiac Arrest.</li> </ul>		
	Ann of Emerg Med 15:10;1181, 1986.  ☐ Ontario, Canada; Brison RJ. Cardiac Arrest in Ontario; Can Med Assoc J; 191-199, 1992		
	<ul> <li>California EMSA Vision Proj</li> </ul>	ect	

CORE INDICATOR INDEX # CA1I	PULSELESS V-FIB or V-TACH - UNWITNESSED			
Measure	Epinephrine: Desired Effect Achieved			
CORE INDICATOR REF	CARDIAC - ADULT			
#CA1	TREATMENT PROTOCOL UTIL	IZATION		
Objective	cardiac origin that achieve a administration of epinephrine	fering from chest pain of suspected desired therapeutic effect from the in pre-hospital setting.		
Classification	☐ Medical care - clinical			
Type of Measure	□ Outcome			
Domain of Performance	□ Effectiveness			
Indicator Reporting Value	□ %			
Display Format	□ List Chart □ Cube Chart □ Bar Chart □ Line Graph			
Frequency of Display	□ Monthly x 12			
Measures of Central Tendency	□ mean - Yes □ mode - No □ variance - No □ standard deviation - Yes			
Trending Analysis	□ NA			
Minimum Data Values	□ 30 values per measure			
Sampling	□ Periodic - Rate			
Aggregation	□ Yes			
Blinded	□ Yes			
Beta Testing	□ None to Date			
Population Denominator (D)	the number of adult patients pulseless V-Fib/Tach	treated by EMS personnel for		
Denominator	Inclusion Criteria	EMSA Data Elements		
Donominator Data Course	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for pulseless V-Fib/Tach -unwitnessed.</li> <li>patients who receive epinephrine any modality or device.</li> <li>event was in prehospital setting</li> <li>specified query time period</li> </ul> EMS Medical Records	□ EMSA# □ EMSA# □ EMSA# □ EMSA#		
Denominator Data Source Population Subset	the number of patients who r	eceive epinephrine where a desired		
Numerator (N)	effect is achieved in the Preh	ospital setting		

Numerator	Inc	lusion Criteria	ΕN	ISA Data Elements
		patient's who are treated in		EMSA#
		prehospital setting		
		Desired effect is any		
		change in patient status		
		where there is full or partial		
		relief of symptoms		
		desired effect is reported		
		by EMS personnel through		
		observation, assessment		
		or by verbal questioning of		
		patient.		
		subset of denominator		
Numerator Data Source		EMS Medical Records		
Description of Indicator		numerator value (N) divided	by d	lenominator value (D) multiplied
Formula		by 100 equals percentage (%	6)	
Indicator Formula		N / D = %		
Numeric Expression	lir	nkage Options	EN	ISA Data Elements
Linkage		name		EMSA #
		dob		EMSA #
		age		EMSA #
		gender		EMSA #
		admit date		EMSA #
		procedures		EMSA #
Stratification		Options		EMSA Data Elements
		by age		EMSA #
		by gender		EMSA #
		by incident type		EMSA #
		by response times		EMSA #
		by scene times		EMSA #
		by provider level		EMSA #
				EMSA #
Indicator Exclusion Criteria		non-cardiac etiologies,		
		cardiac etiologies where card	ııac	cnest pain was not chief
		compliant		1
		event witnessed by EMS per		nei
		epinephrine not administered		administration not reported
		desired effect from epinephri event not treated by EMS pe		
References		Utstein Model; Pitt, Penn Kas		
Veletelice2	<b>"</b>			Utstein Model applied to Rural-
		Suburban EMS System. Ann		• •
		Wisconsin study; Olson DW,		
	-	Wisconsin Experience;. Ann		
		Seattle Washington; Weaver		•
	-	Improving Survival from Out		
		Ann of Emerg Med 15:10;118		•
				diac Arrest in Ontario; Can Med
		Assoc J; 191-199, 1992		
Source		California EMSA Vision Proje	ect	

CORE INDICATOR	PULSELESS V-FIB/TACH UNWITNESSED		
Index # CA1J			
Measure	Lidocaine: Frequency of Administration		
CORE INDICATOR REF #CA1	CARDIAC - ADULT TREATMENT PROTOCOL UTIL	IZATION	
Objective		fering from chest pain of suspected	
Objective		docaine in pre-hospital setting.	
Classification	□ Medical care - clinical	dodane in pre neopital setting.	
Type of Measure	□ Process		
Domain of Performance	☐ Frequency, Compliance		
Indicator Reporting Value	□ %		
Display Format	□ List Chart		
	Cube Chart		
	□ Bar Chart		
	□ Line Graph		
- (5)	□ Process Control Chart		
Frequency of Display	☐ Monthly x 12		
Measures of Central	<ul><li>□ mean - Yes</li><li>□ mode - No</li></ul>		
Tendency	<ul><li>□ mode - No</li><li>□ variance - No</li></ul>		
	standard deviation - No		
Trending Analysis	□ NA		
Minimum Data Values	☐ 30 values per measure		
Sampling	□ Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	■ None to Date		
Population Denominator (D)	the number of adult patients treated by EMS personnel for pulseless		
	V-Fib/Tach .		
Denominator	Inclusion Criteria EMSA Data Elements		
	□ patient has reached age 15	□ EMSA#	
	<ul><li>patient treated by EMS</li></ul>		
	personnel for pulseless V-	□ EMSA #	
	Fib/Tach -unwitnessed	□ EMSA#	
	<ul><li>event was in prehospital</li></ul>	D EMCA #	
	setting  specified query time period	□ EMSA#	
	a specified query time period	□ EMSA#	
Denominator Data Source	□ EMS Medical Records	1 = = = = = = = = = = = = = = = = = = =	
Population Subset	•	receive Lidocaine in the Prehospital	
Numerator (N)	setting		
Numerator	Inclusion Criteria	EMSA Data Elements	
	patient's who are treated in probability acting	□ EMSA#	
	prehospital setting patients who receive one		
	or more doses of Lidocaine		
	□ Subset of denominator		
	□ time period for query match		
	denominator		
Numerator Data Source	□ EMS Medical Records		
Description of Indicator		by denominator value (D) multiplied by	
Formula	100 equals percentage (%)		
Indicator Formula	□ N / D = %		
Numeric Expression	Linkana Ordina	FMCA Data Flamanta	
Linkage	Linkage Options	EMSA Data Elements	

		name		EMSA #	
		dob		EMSA #	
		age		EMSA #	
		gender		EMSA #	
		admit date		EMSA #	
	_	procedures		EMSA #	
Stratification		Options		EMSA Data Elements	
		by age		EMSA #	
		by gender		EMSA #	
		by incident type		EMSA #	
		by response times		EMSA #	
		by scene times		EMSA #	
		by provider level		EMSA #	
		•			
				EMSA #	
Indicator Exclusion Criteria		non-cardiac etiologies,			
		event witnessed by EMS personnel			
		event not treated by EMS personnel			
References		Utstein Model; Pitt, Penn Kass LE. One Year Survival after Prehospital			
		Cardiac Arrest: The Utstein Model applied to Rural-Suburban EMS			
		System. Ann of Emerg Med; 12:17-20, 1994			
		Wisconsin study; Olson DW, MD. EMT-Defibrillation: The Wisconsin			
		Experience;. Ann of Emerg Med, 18:8;806. 1989			
		Seattle Washington; Weaver DW, MD. Considerations for Improving			
			Survival from Out of Hospital Cardiac Arrest.		
		Ann of Emerg Med 15:10;1181, 1986.			
			Card	diac Arrest in Ontario; Can Med	
		Assoc J; 191-199, 1992			
Source		California EMSA Vision Proje	ect		

CORE INDICATOR INDEX # CA1K	PULSELESS V-FIB or V-T	ACH - UNWITNESSED		
Measure	Lidocaine: Desired Effect	Achieved		
CORE INDICATOR REF #CA1	CARDIAC - ADULT TREATMENT PROTOCOL UTIL	CARDIAC - ADULT TREATMENT PROTOCOL UTILIZATION		
Objective		ffering from pulseless V-Fib/Tach –		
	unwitnessed; who achieve a administration of Lidocaine ir	desired therapeutic effect from the		
Classification	□ Medical care - clinical	T pre-nospital setting.		
Type of Measure	□ Outcome			
Domain of Performance	□ Effectiveness			
Indicator Reporting Value	□ %			
Display Format	□ List Chart			
	□ Cube Chart			
	☐ Bar Chart			
Frequency of Display	☐ Line Graph ☐ Monthly x 12			
Measures of Central	□ mean - Yes			
Tendency	□ mode - No			
	□ variance - No			
	<ul><li>standard deviation - Yes</li></ul>			
Trending Analysis	□ NA			
Minimum Data Values	□ 30 values per measure			
Sampling	Periodic - Rate			
Aggregation	☐ Yes			
Blinded	☐ Yes			
Beta Testing Population Denominator (D)	<ul><li>None to Date</li><li>the number of adult patients</li></ul>	troated by EMS personnel for		
Fopulation Denominator (D)	the number of adult patients treated by EMS personnel for pulseless V-Fib/Tach - unwitnessed.			
Denominator	Inclusion Criteria	EMSA Data Elements		
	<ul><li>patient has reached age 15</li></ul>	□ EMSA#		
	□ patient treated by EMS			
	personnel for pulseless V-	□ EMSA #		
	Fib/V-Tach -witnessed  event was in prehospital	□ EMSA#		
	<ul><li>event was in prehospital setting</li></ul>	□ EMSA#		
	<ul><li>specified query time period</li></ul>	Livio, Cir		
		□ EMSA#		
Denominator Data Source	EMS Medical Records			
Population Subset	·	receive Lidocaine and a desired effect		
Numerator (N)	is achieved in the Prehospita			
Numerator	Inclusion Criteria  □ patient's who are treated in	EMSA Data Elements  □ EMSA#		
	prehospital setting	d EWSA#		
	□ Received one or more			
	doses of Lidocaine			
	<ul><li>Desired effect is any</li></ul>			
	change in patient status			
	where there is full or partial			
	relief of symptoms			
	<ul> <li>desired effect is reported</li> <li>by EMS personnel through</li> </ul>			
	by EMS personnel through observation, assessment			
	or by verbal questioning of			
	patient.			
	<ul> <li>Subset of denominator</li> </ul>			

		Time period query match		
Normanatan Bata Carras		denominator		
Numerator Data Source		EMS Medical Records		(D)
Description of Indicator		` ,	-	enominator value (D) multiplied
Formula		by 100 equals percentage (%	b)	
Indicator Formula		N / D = %		
Numeric Expression	1 :	leans Ontions	- BA	CA Data Flamenta
Linkage		nkage Options		SA Data Elements
		name dob		EMSA # EMSA #
		age gender		EMSA # EMSA #
		admit date		EMSA #
		procedures		EMSA #
Stratification	_	Options	]	EMSA Data Elements
Stratification		by age		EMSA #
		by gender		EMSA #
		by incident type		EMSA #
		by response times		EMSA #
		by scene times		EMSA #
		by provider level		EMSA #
				EMSA #
Indicator Exclusion Criteria		non-cardiac etiologies,		
		V-Fib/Tach with pulseless		
		event witnessed by EMS per	sonn	el
		Lidocaine not administered b		
		desired effect from oxygen a	dmini	istration not reported.
		event not treated by EMS pe		
References		Utstein Model; Pitt, Penn Kas		
				tstein Model applied to Rural-
		Suburban EMS System. Ann		
		Wisconsin study; Olson DW,		
	_	Wisconsin Experience;. Ann		
		Seattle Washington; Weaver		
		Improving Survival from Out		
		Ann of Emerg Med 15:10;118	51, 18	900.
			Card	iac Arrest in Ontario; Can Med
00		Assoc J; 191-199, 1992	t	
Source		California EMSA Vision Proje	₽CT	

CORE INDICATOR INDEX #CA1L	PULSELESS V-FIB or V-TACH - UNWITNESSED				
Measure	Re	Return of Spontaneous Circulation (ROSC)			
CORE INDICATOR REF #CA1	_	RDIAC - ADULT EATMENT PROTOCOL UTIL	IZA <sup>-</sup>	TION	
Objective		to measure % of patients wh circulation (ROSC) after suffe fibrillation (VF) or ventricular unwitnessed and treated by	ering tach	a pulseless ventricular aycardia (VT) event which is	
Classification		medical care - clinical			
Type of Measure		outcome			
Domain of Performance		Effectiveness			
Indicator Reporting Value		%			
Display Format		Bar Chart Line Graph			
Frequency of Display		Monthly x 12			
Measures of Central		mean - Yes	_		
Tendency		mode - No			
		variance - No			
Trending Analysis		standard deviation - No NA			
Minimum Data Values		30 values per measure			
Sampling		Periodic - Rate			
Aggregation		□ Yes			
Blinded		□ Yes			
Beta Testing					
Population Denominator (D)	□ the number of adult patients who suffer a pulseless VF or VT				
	event unwitnessed by EMS personnel				
Denominator	Inc	lusion Criteria	EN	ISA Data Elements	
		patient has reached age 15		EMSA #36	
		patient has suffered a VF			
		or VT event)		EMSA #54VTAC, 54VFIB	
		patient was pulseless (patient VF or VT		EMSA #54C-A	
		event was in prehospital setting		EMSA #54	
		patient VF & VT event was		EMSA #52	
		not witnessed by EMS			
		personnel specified time period		EMSA #11	
Denominator Data Source		EMS Medical Records			
Population Subset		the number of patients who I	าลงค	ROSC	
Numerator (N)	-	Hamber of patients will i			
Numerator	Inc	lusion Criteria	EM	ISA Data Elements	
		patients who survive to		EMSA#	
		ROSC			
		ROSC is the return of			
		spontaneous circulation by			
		the patient as evidenced by a pulse at any site for any			
		period of time after the			
		initial absence of a pulse			

		was determined by EMS		
		personnel		
		event occurred in		
		Prehospital setting		
		Subset of denominator		
		Time period query match		
		denominator		
Numerator Data Source		EMS Medical Records		
Description of Indicator				enominator value (D) multiplied
Formula		by 100 equals percentage (%	b)	
Indicator Formula		N / D = %		
Numeric Expression				
Linkage		ıkage Options		ISA Data Elements
		name		EMSA #29
		dob		EMSA #35
		age .		EMSA #36
		gender		EMSA #38
		admit date		EMSA # ?
01(17		procedures		EMSA #73
Stratification	_	Options	_	EMSA Data Elements
		by age		EMSA #36
		by gender		EMSA #38
		by incident type		EMSA #8
		by response times		EMSA #17-20
		by scene times		EMSA #8
		by number of defibrillations		EMSA #73 (99.62)
		by provider level		EMOA WOE
La Participa de la Carta de la	_	P 0 1 2		EMSA #25
Indicator Exclusion Criteria		non-cardiac etiologies,		ation was not attended by
		cardiac etiologies where resu	ISCIT	ation was not attempted by
		EMS personnel		nal
		event witnessed by EMS pe		
Deferences	) [	patient has not survived to he Utstein Model; Pitt, Penn Kas		
References				Utstein Model applied to Rural-
		Suburban EMS System. And Wisconsin study; Olson DW,		
		Wisconsin Study, Olson DW, Wisconsin Experience;. Ann		
		Seattle Washington; Weaver		
	_	Improving Survival from Out		
		Ann of Emerg Med 15:10;118		
				diac Arrest in Ontario; Can Med
	<b>_</b>	Assoc J; 191-199, 1992	Jan	GIGO / IITOSI IIT OTIIGITO, OGIT MEG
Source		California EMSA Vision Proje	ct	
554.00	_			

CORE INDICATOR INDEX #CA1M	Pl	JLSELESS V-FIB or V-T	ACI	H - UNWITNESSED	
Measure	Ad	Admit to Emergency Department			
CORE INDICATOR REF #CA1	_	RDIAC - ADULT EATMENT PROTOCOL UTIL	17 / 1	CION	
Objective				rvive to emergency department	
0.0,000				ess ventricular fibrillation (VF)	
				ent which is unwitnessed and	
		treated by EMS personnel			
Classification		medical care - clinical			
Type of Measure		outcome			
Domain of Performance		Effectiveness %			
Indicator Reporting Value Display Format		Cube Chart			
Display Format		Bar Chart			
	_	Line Graph			
Frequency of Display		Monthly x 12			
Measures of Central		mean - Yes			
Tendency		mode - No			
Transling Analysis	]	standard deviation - Yes			
Trending Analysis Minimum Data Values		NA 20 voluce per massure			
Sampling		□ 30 values per measure □ Periodic - Rate			
Aggregation	□ Periodic - Rate □ Yes				
Blinded	_				
Beta Testing	□ None to Date				
Population Denominator (D)	the number of adult patients who suffer a pulseless VF or VT				
. ,	event unwitnessed by EMS personnel				
Denominator	Inc	clusion Criteria	EM	SA Data Elements	
		patient has reached age 15		EMSA #36	
		patient has suffered a VF	_	EWO/ WOO	
		or VT event)		EMSA #54VTAC, 54VFIB	
		patient was pulseless		EMSA #54C-A	
		(patient VF or VT			
				EMSA #54	
		setting patient VF & VT event was		EMSA #52	
		not witnessed by EMS	_	LIVION #JZ	
		personnel			
		specified time period		EMSA #11	
Denominator Data Source		EMS Medical Records			
		Hospital Admit Records			
Donulation Subset		the number of patients who s	u prode	to to ED Admission	
Population Subset Numerator (N)		the number of patients who s	oui VIV	VE TO ED AUTHISSIUT	
Numerator	Inc	clusion Criteria	EM	SA Data Elements	
		patients who survive to ED		discharge status (TBD)	
		admit		` '	
		Subset of Denominator			
		Time period query match			
		denominator			
Numerator Data Source		EMS Medical records			
		hospital discharge records OSHPD discharge record			
	_	Corn D discharge record		l	

Description of Indicator		numerator value (N) divided by denominator value (D) multiplied			
Formula		by 100 equals percentage (%)			
Indicator Formula		N / D = %			
Numeric Expression					
Linkage	Lir	kage Options	EN	ISA Data Elements	
		name		EMSA #29	
		dob		EMSA #35	
		age		EMSA #36	
		gender		EMSA #38	
		admit date		EMSA # ?	
		procedures		EMSA #73	
Stratification		Options		EMSA Data Elements	
		by age		EMSA #36	
		by gender		EMSA #38	
		by incident type		EMSA #8	
		by response times		EMSA #17-20	
		by scene times		EMSA #8	
		by number of defibrillations		EMSA #73 (99.62)	
		by provider level	_	5140 A #05	
				EMSA #25	
Indicator Exclusion Criteria		non-cardiac etiologies,	:4	-ti	
		cardiac etiologies where resuscitation was not attempted by			
	_	EMS personnel			
		event witnessed by EMS personnel patient has not survived to hospital discharge			
References	<u> </u>				
References	_	Utstein Model; Pitt, Penn Kass LE. One Year Survival after Prehospital Cardiac Arrest: The Utstein Model applied to Rural-			
		•		• •	
		Suburban EMS System. Ann of Emerg Med; 12:17-20, 1994 Wisconsin study; Olson DW, MD. EMT-Defibrillation: The			
	_	Wisconsin Experience;. Ann			
		•			
	_	Seattle Washington; Weaver DW, MD. Considerations for Improving Survival from Out of Hospital Cardiac Arrest.			
		Ann of Emerg Med 15:10;1181, 1986.			
		_		diac Arrest in Ontario; Can Med	
	_	Assoc J; 191-199, 1992	20.1	and the second container, can inter-	
Source		California EMSA Vision Proje	ect		

CORE INDICATOR INDEX #CA1N	Pl	JLSELESS V-FIB or V-T	AC	H - UNWITNESSED	
Measure	Sı	Survival to Hospital Discharge			
CORE INDICATOR REF #CA1		RDIAC - ADULT EATMENT PROTOCOL UTIL	IZA	TION	
Objective		suffering a pulseless ventricu tachycardia (VT) event which EMS personnel	lar f		
Classification		medical care - clinical			
Type of Measure		outcome			
Domain of Performance		Effectiveness			
Indicator Reporting Value		%			
Display Format		Bar Chart			
Francisco of Dia 1	]	Line Graph			
Frequency of Display		Monthly x 12 mean - Yes			
Measures of Central		mean - Yes mode - No			
Tendency		variance - No			
		standard deviation - No			
Trending Analysis	10	NA			
Minimum Data Values	_	30 values per measure			
Sampling	_	Periodic - Rate			
Aggregation		☐ Yes			
Blinded		□ Yes			
Beta Testing	□ None to Date				
Population Denominator (D)	the number of adult patients who suffer a pulseless VF or VT				
· oparation zonominator (z)	event not witnessed by EMS personnel				
Denominator	Inc	clusion Criteria		ISA Data Elements	
		patient has reached age 15		EMSA #36	
		patient has suffered a VF			
		or VT event)		EMSA #54VTAC, 54VFIB	
		patient was pulseless		EMSA #54C-A	
		(patient VF or VT		ENACA #EA	
		event was in prehospital setting	ш	EMSA #54	
		patient VF & VT event was		EMSA #52	
	_	not witnessed by EMS	_		
		personnel			
		specified time period		EMSA #11	
Denominator Data Source		EMS Medical Records			
Population Subset		the number of patients who s	urvi	ve to hospital discharge	
Numerator (N)	l	Junion Cuitaria		ASA Data Elamanta	
Numerator		clusion Criteria		MSA Data Elements	
		patients who survive to		discharge status (TBD)	
		hospital discharge Subset of denominator			
		Time period query match			
	_	denominator			
Numerator Data Source		EMS Records			
		hospital discharge records			
		OSHPD discharge record			
	•	3		· ·	

Description of Indicator		numerator value (N) divided by denominator value (D) multiplied			
Formula		by 100 equals percentage (%)			
Indicator Formula		N / D = %			
Numeric Expression					
Linkage	Lir	nkage Options	ΕN	ISA Data Elements	
		name		EMSA #29	
		dob		EMSA #35	
		age		EMSA #36	
		gender		EMSA #38	
		admit date		EMSA # ?	
		procedures		EMSA #73	
Stratification		Options		EMSA Data Elements	
		by age		EMSA #36	
		by gender		EMSA #38	
		by incident type		EMSA #8	
		by response times		EMSA #17-20	
		by scene times		EMSA #8	
		by number of defibrillations		EMSA #73 (99.62)	
		by provider level			
				EMSA #25	
Indicator Exclusion Criteria		non-cardiac etiologies,			
		cardiac etiologies where resuscitation was not attempted by			
		EMS personnel			
		event witnessed by EMS personnel			
		patient has not survived to hospital discharge			
References		Utstein Model; Pitt, Penn Kass LE. One Year Survival after			
		Prehospital Cardiac Arrest: The Utstein Model applied to Rural-			
		Suburban EMS System. Ann of Emerg Med; 12:17-20, 1994			
		Wisconsin study; Olson DW, MD. EMT-Defibrillation: The			
		Wisconsin Experience; Ann of Emerg Med, 18:8;806. 1989			
		Seattle Washington; Weaver DW, MD. Considerations for			
		Improving Survival from Out of Hospital Cardiac Arrest. Ann of Emerg Med 15:10;1181, 1986.			
		•			
		Assoc J; 191-199, 1992	Car	diac Arrest in Ontario; Can Med	
Source		California EMSA Vision Proje	oct		
Source		Camorna Elvion vision Proje	UL		

CORE INDICATOR INDEX # CA2A	PULSELESS V-FIB or V-TACH - WITNESSED				
Measure	CPR Performed by Bystander				
Objective		to measure % of patients who suffering a pulseless ventricutachycardia (VT) event which personnel	lar f		
Classification		medical care - clinical			
Type of Measure		Process			
Domain of Performance		Patient Care			
Indicator Reporting Value		%			
Display Format		List			
		Cube Chart			
		Bar Chart			
		Line Graph			
Farmer (Direct	0 (	Process Control Chart			
Frequency of Display		Monthly x 12			
Measures of Central		mean - Yes mode - No			
Tendency		variance - No			
	ם כ	standard deviation - Yes			
Trending Analysis	ם נ	NA			
Minimum Data Values		30 values per measure			
Sampling					
Aggregation					
Blinded	□ Yes				
Beta Testing		None to Date			
Population Denominator (D)					
. , ,	event witnessed by EMS personnel				
Denominator	Inc	lusion Criteria	EN	ISA Data Elements	
		patient has reached age 15		EMSA #36	
	ם כ	patient has suffered a VF	_	LIVISA #30	
	_	or VT event)		EMSA #	
		patient was pulseless		EMSA #54C-A	
		(patient VF or VT			
		event was in prehospital setting		EMSA #54	
		patient VF & VT event was witnessed by EMS		EMSA #52	
		personnel specified time period		EMSA #11	
Denominator Data Source		EMS Medical Records			
Population Subset		the number of patients who r	ecei	ve bystander CPR in	
Numerator (N)		Prehospital setting		•	
Numerator	Inc	clusion Criteria	EN	ISA Data Elements	
		bystander CPR is		discharge status (TBD)	
		performed by individuals			
		(professional or non-			
		professional) who are on			
		scene prior to arrival of on-			
		duty EMS personnel Subset of denominator			
Numerator Data Source		hospital discharge records			
Numerator Data Source	ם כ	OSHPD discharge record			
	_	Com D discharge record		l	

Description of Indicator		numerator value (N) divided by denominator value (D) multiplied			
Formula		by 100 equals percentage (%)			
Indicator Formula		N / D = %			
Numeric Expression					
Linkage	Lir	nkage Options	EN	ISA Data Elements	
		name		EMSA #29	
		dob		EMSA #35	
		age		EMSA #36	
		gender		EMSA #38	
		admit date		EMSA#?	
		procedures		EMSA #73	
Stratification		Options		EMSA Data Elements	
		by age		EMSA #36	
		by gender		EMSA #38	
		by incident type		EMSA #8	
		by response times		EMSA #17-20	
		by scene times		EMSA #8	
		by number of defibrillations		EMSA #73 (99.62)	
		by provider level		<b>5110</b> 4 was	
				EMSA #25	
Indicator Exclusion Criteria		non-cardiac etiologies,			
		cardiac etiologies where resuscitation was not attempted by EMS personnel			
		event not witnessed by EMS	: ner	rsonnel	
	0				
References		•			
		Prehospital Cardiac Arrest: The Utstein Model applied to Rural-			
		Suburban EMS System. Ann of Emerg Med; 12:17-20, 1994			
		Wisconsin study; Olson DW,			
		Wisconsin Study, Olson DW, MD. Elin-Bellothiation. The Wisconsin Experience;. Ann of Emerg Med, 18:8;806. 1989			
		Improving Survival from Out of Hospital Cardiac Arrest.			
		Ann of Emerg Med 15:10;1181, 1986.			
		Assoc J; 191-199, 1992			
Source		California EMSA Vision Proje	ect		

CORE INDICATOR INDEX # CA2B	PULSELESS V-FIB	or V-TACH - WITNESSED		
Measure	Defibrillation Performe			
	Public Access Defibrillation (PAD)			
CORE INDICATOR REF #CA2	CARDIAC - ADULT TREATMENT PROTOCO	N. LITH IZATION		
Objective		ents who have defibrillation performed by		
	lay public after suffe	ring a pulseless ventricular fibrillation (VF)		
		ardia (VT) event which is witnessed and		
Classification	treated by EMS personal medical care - clinical			
Type of Measure	□ Process			
Domain of Performance	□ Frequency			
Indicator Reporting Value	□ %			
Display Format	□ Bar Chart			
	☐ Line Graph	u4		
Frequency of Display	<ul><li>Process Control Cha</li><li>Monthly x 12</li></ul>	IL .		
Measures of Central	□ mean - Yes			
Tendency	□ mode - No			
	variance - No			
	standard deviation - `	Yes		
Trending Analysis	□ NA			
Minimum Data Values	30 values per measure			
Sampling Aggregation	□ Periodic - Rate □ Yes			
Blinded	□ Yes			
Beta Testing	□ None to Date			
Population Denominator (D)	□ the number of adult patients who suffer a pulseless VF or VT			
	event witnessed by EMS personnel			
Denominator	Inclusion Criteria EMSA Data Elements			
	patient has reached a	age 15 🔲 EMSA #36		
	patient has suffered a			
	or VT event)	□ EMSA #54VTAC, 54VFIB		
	patient was pulseless (patient VF or VT)	EMSA #54C-A		
	<ul><li>event was in prehos setting</li></ul>	pital   EMSA #54		
	□ patient VF & VT ever	nt was 📮 EMSA #52		
	witnessed by EMS			
	personnel			
	specified time period	□ EMSA #11		
Denominator Data Source	■ EMS Medical Record	S		
Population Subset	□ the number of patien	ts who receive defibrillation performed by		
Numerator (N)	lay person	receive demandation performed by		
Numerator	Inclusion Criteria	EMSA Data Elements		
	□ defibrillation performed			
	lay public (profession			
	non-professional) pric arrival of on-duty EM			
	personnel	3		
Numerator Data Source	□ EMS Medical Record	s		
Description of Indicator		divided by denominator value (D) multiplied		
Formula	by 100 equals percentage (%)			

Indicator Formula Numeric Expression		□ N/D=%				
Linkage	l ir	inkage Options EMSA Data Elements				
Lilikage		name		EMSA #29		
		dob		EMSA #35		
	ם כ	age		EMSA #36		
		gender		EMSA #38		
		admit date		EMSA # ?		
		procedures		EMSA #73		
Stratification		Options		EMSA Data Elements		
		by age		EMSA #36		
		by gender		EMSA #38		
		by incident type		EMSA #8		
		by response times		EMSA #17-20		
		by scene times		EMSA #8		
		by provider level		EMSA #73 (		
Indicator Exclusion Criteria		3				
		EMS personnel				
		panioni nai anti anti anti anti anti anti ant				
References						
		Prehospital Cardiac Arrest: The Utstein Model applied to Rural-				
		Suburban EMS System. Ann of Emerg Med; 12:17-20, 1994				
		□ Wisconsin study; Olson DW, MD. EMT-Defibrillation: The				
		Wisconsin Experience; Ann of Emerg Med, 18:8;806. 1989				
	_	Seattle Washington; Weaver DW, MD. Considerations for Improving Survival from Out of Hospital Cardiac Arrest.				
		Ann of Emerg Med 15:10;1181, 1986.				
		Ontario, Canada; Brison RJ. Cardiac Arrest in Ontario; Can Med				
		Assoc J; 191-199, 1992	J 4. 4	and the second of the second o		
Source		California EMSA Vision Proje	ect			

CORE INDICATOR INDEX # CA2C	PULSELESS V-FIB or V-T	ACH - WITNESSED		
Measure	Automatic External Defibrillation (AED) Performed by EMS Personnel			
CORE INDICATOR REF #CA2	CARDIAC - ADULT TREATMENT PROTOCOL UTIL	IZATION		
Objective	to measure % of patients wh	o receive defibrillation by automatic		
	or semi-automatic external d duty EMS personnel on puls	efibrillator and performed by on- eless V-Fib/Tach witnessed		
Classification	☐ medical care - clinical	_		
Type of Measure	□ Process			
Domain of Performance	□ Patient Care			
Indicator Reporting Value	□ %			
Display Format	□ List			
	□ Cube Chart			
	□ Bar Chart			
	<ul><li>□ Line Graph</li><li>□ Process Control Chart</li></ul>			
Frequency of Display	<ul><li>□ Process Control Chart</li><li>□ Monthly x 12</li></ul>			
Measures of Central	□ mean - Yes			
Tendency	mode - No			
	□ variance - No			
	standard deviation - Yes			
Trending Analysis	□ NA			
Minimum Data Values	□ 30 values per measure			
Sampling	□ Periodic - Rate			
Aggregation	□ Yes			
Blinded	□ Yes			
Beta Testing	□ None to Date			
Population Denominator (D)		the number of adult patients who suffer a pulseless VF or VT		
Denominator	event witnessed by EMS per Inclusion Criteria	EMSA Data Elements		
2011011111III.CO				
	patient has reached age 15	□ EMSA #36		
	□ patient has suffered a VF	5 FMOA #54VTAO 54V5ID		
	or VT event) □ patient was pulseless	□ EMSA #54VTAC, 54VFIB		
	patient was pulseless  (patient VF or VT	☐ EMSA #54C-A		
	<ul><li>event was in prehospital</li></ul>	□ EMSA #54		
	setting	- FMOA #50		
	□ patient VF & VT event was witnessed by EMS	□ EMSA #52		
	personnel	D EMSA #44		
Denominator Data Source	□ specified time period  EMS Medical Records	□ EMSA #11		
Denominator Data Source	LIVIO IVIEUICAI INECUIUS			
Population Subset	<ul> <li>defibrillation by automatic or</li> </ul>	semi-automatic external defibrillator		
Numerator (N)	and performed by on-duty El	MS personnel		
Numerator	Inclusion Criteria	EMSA Data Elements		
	<ul><li>patients who survive to hospital discharge</li></ul>	☐ discharge status (TBD)		
Numerator Data Source	□ EMS Medical records			
Description of Indicator Formula	<ul> <li>numerator value (N) divided by denominator value (D) multiplied by 100 equals percentage (%)</li> </ul>			
Indicator Formula	□ N/D = %	,		
Numeric Expression				

Linkage	Linkage Options		EN	EMSA Data Elements		
		name		EMSA #29		
		dob		EMSA #35		
		age		EMSA #36		
		gender		EMSA #38		
		admit date		EMSA # ?		
		procedures		EMSA #73		
Stratification		Options		EMSA Data Elements		
		by age		EMSA #36		
		by gender		EMSA #38		
		by incident type		EMSA #8		
		by response times		EMSA #17-20		
		by scene times		EMSA #8		
		by provider level		EMSA #73		
Indicator Exclusion Criteria		non-cardiac etiologies,				
		cardiac etiologies where resu	ıscit	ation was not attempted by		
		EMS personnel				
		use of manual defibrillator				
		defib performed by lay public				
		event not witnessed by EMS				
		patient has not survived to he				
References		Utstein Model; Pitt, Penn Kas	ss LE	E. One Year Survival after		
				Jtstein Model applied to Rural-		
		Suburban EMS System. Ann				
		Wisconsin study; Olson DW,				
		Wisconsin Experience;. Ann				
		Seattle Washington; Weaver				
		Improving Survival from Out		•		
		Ann of Emerg Med 15:10;118				
			Car	diac Arrest in Ontario; Can Med		
		Assoc J; 191-199, 1992				
Source		California EMSA Vision Proje	ect			

CORE INDICATOR INDEX # CA2D	Pl	JLSELESS V-FIB or V-T	AC	H - WITNESSED
Measure	<u>La</u> ı	ose of Time to First Shock 1	0 m	ins or less
CORE INDICATOR REF	CA	RDIAC - ADULT		
#CA2	TR	EATMENT PROTOCOL UTIL		
Objective				ceive defibrillation in 10 minutes
		or less from the estimated tin pulseless V-Fib/Tach event	ne o	f onset for a witnessed
Classification		medical care - clinical		
Type of Measure		process		
Domain of Performance		Patient Care		
Indicator Reporting Value		%		
Display Format		Cube Chart		
		Bar Chart		
		Line Graph		
Francisco of Dia 1	<b>-</b>	Process Control Chart		
Frequency of Display Measures of Central		Monthly x 12 mean - Yes		
Tendency		mode - No		
rendency		variance - No		
		standard deviation - No		
Trending Analysis		NA		
Minimum Data Values		30 values per measure		
Sampling		Periodic - Rate		
Aggregation		Yes		
Blinded		Yes		
Beta Testing		None to Date		#
Population Denominator (D)		the number of adult patients event witnessed by EMS per		•
Denominator	Inc	lusion Criteria		ISA Data Elements
201011111111				
		patient has reached age 15		EMSA #36
		patient has suffered a VF or VT event)		EMSA #54VTAC, 54VFIB
		patient was pulseless		EMSA #54C-A
	_	(patient VF or VT		EMOTO TO TO
		event was in prehospital setting		EMSA #54
		patient VF & VT event was		EMSA #52
		witnessed by EMS		
		personnel		
		specified time period		EMSA #11
Denominator Data Source		EMS Medical Records		
Population Subset		the number of patients who r	ecei	ve shock within 10 mins or less
Numerator (N)		from estimated time of onset		
Numerator	Inc	lusion Criteria		ISA Data Elements
		patients who receive first		EMSA#
		defibrillatory shock within		
		10 mins or less		
		estimated time of onset is		
		dependent upon the best subjective assessment or		
		evidence as witnessed by		
		EMS personnel on scene.		
	•	,	•	

Numerator Data Source		EMS Medical Records		
Description of Indicator				enominator value (D) multiplied
Formula		by 100 equals percentage (%	6)	
Indicator Formula		N/D = %		
Numeric Expression				
Linkage	Lir	ıkage Options	EN	ISA Data Elements
		name		EMSA #29
		dob		EMSA #35
		age		EMSA #36
		gender		EMSA #38
		admit date		EMSA # ?
04-48-4		procedures		EMSA #73
Stratification		Options		EMSA Data Elements
		by age		EMSA #36
		by gender		EMSA #38
		by incident type		EMSA #8
		by response times		EMSA #17-20
		by scene times		EMSA #8 EMSA #
Indicator Exclusion Criteria		by provider level non-cardiac etiologies,		EMSA #
indicator Exclusion Criteria		cardiac etiologies where resu	ıc cit	ation was not attempted by
	_	EMS personnel	JSCIL	ation was not attempted by
		Time to shock greater than 1	∩ mi	ns
	<b>J</b>	event not witnessed by EMS		
		patient has not survived to he		
References		Utstein Model; Pitt, Penn Kas		
				Utstein Model applied to Rural-
		Suburban EMS System. Ann		
		Wisconsin study; Olson DW,		
		Wisconsin Experience;. Ann		
		Seattle Washington; Weaver		
		Improving Survival from Out		
		Ann of Emerg Med 15:10;118		
		Ontario, Canada; Brison RJ.	Card	diac Arrest in Ontario; Can Med
		Assoc J; 191-199, 1992		
Source		California EMSA Vision Proje	ect	

CORE INDICATOR Index # CA2E	PU	LSELESS V-FIB/TACH WIT	NES	SSED	
Measure	Pre	ehospital Defibrillation: Fred	uen	cy of Administration	
CORE INDICATOR REF		RDIAC - ADULT			
#CA2		EATMENT PROTOCOL UTIL			
Objective		to measure % of patients su			
				nycardia (VT) event, which is, ore defibrillatory shocks in pre-	
		hospital setting.	, ,,,,	ore delibrillatory shocks in pre	
Classification		Medical care - clinical			
Type of Measure		Process			
Domain of Performance		Frequency, Compliance			
Indicator Reporting Value		%			
Display Format		List Chart			
		Cube Chart			
	□ Bar Chart □ Line Graph				
		Process Control Chart			
Frequency of Display	<u> </u>	Monthly x 12			
Measures of Central		mean - Yes			
Tendency		mode - No			
,	□ variance - No				
	□ standard deviation - No				
Trending Analysis		NA			
Minimum Data Values		30 values per measure			
Sampling		Periodic - Rate			
Aggregation		Yes			
Blinded		Yes			
Beta Testing		None to Date	4	to diber EMO nonconsilitan	
Population Denominator (D)		the number of adult patients pulseless V-Fib/Tach witness		ted by EMS personnel for	
Denominator	Inc	lusion Criteria		ISA Data Elements	
20101111101					
		patient has reached age 15 patient treated by EMS		EMSA #	
		personnel for pulseless V-		EMSA #	
		Fib/Tach.		EMSA #	
		Event in withoughd by EMC			
		Event is witnessed by EMS		EMSA #	
		personnel	_	EMSA #	
		•		EMSA #	
	0 0	personnel event was in prehospital setting specified query time period			
Denominator Data Source	0 0	personnel event was in prehospital setting specified query time period S Medical Records		EMSA #	
Population Subset	0 0	personnel event was in prehospital setting specified query time period S Medical Records the number of patients who re	ecei	EMSA #	
Population Subset Numerator (N)	BM	personnel event was in prehospital setting specified query time period S Medical Records the number of patients who r shocks in the Prehospital set	ecei	EMSA # ve one or more defibrillatory	
Population Subset	BM	personnel event was in prehospital setting specified query time period S Medical Records the number of patients who r shocks in the Prehospital set	eceiting	EMSA # ve one or more defibrillatory  ISA Data Elements	
Population Subset Numerator (N)	BM	personnel event was in prehospital setting specified query time period S Medical Records the number of patients who r shocks in the Prehospital set lusion Criteria patients who receive shock	ecei	EMSA # ve one or more defibrillatory	
Population Subset Numerator (N)	EM	personnel event was in prehospital setting specified query time period S Medical Records the number of patients who r shocks in the Prehospital set lusion Criteria patients who receive shock from any type of defib unit	eceiting	EMSA # ve one or more defibrillatory  ISA Data Elements	
Population Subset Numerator (N)	BM	personnel event was in prehospital setting specified query time period S Medical Records the number of patients who r shocks in the Prehospital set lusion Criteria patients who receive shock from any type of defib unit patient who receive shock	eceiting	EMSA # ve one or more defibrillatory  ISA Data Elements	
Population Subset Numerator (N)	EM	personnel event was in prehospital setting specified query time period S Medical Records the number of patients who r shocks in the Prehospital set lusion Criteria patients who receive shock from any type of defib unit	eceiting	EMSA # ve one or more defibrillatory  ISA Data Elements	
Population Subset Numerator (N)	EM	personnel event was in prehospital setting specified query time period S Medical Records the number of patients who r shocks in the Prehospital set lusion Criteria patients who receive shock from any type of defib unit patient who receive shock from any provider; lay or	eceiting	EMSA # ve one or more defibrillatory  ISA Data Elements	
Population Subset Numerator (N)	EM D	personnel event was in prehospital setting specified query time period S Medical Records the number of patients who r shocks in the Prehospital set lusion Criteria patients who receive shock from any type of defib unit patient who receive shock from any provider; lay or professional	eceiting	EMSA # ve one or more defibrillatory  ISA Data Elements	
Population Subset Numerator (N) Numerator Numerator	EM D	personnel event was in prehospital setting specified query time period S Medical Records the number of patients who r shocks in the Prehospital set lusion Criteria patients who receive shock from any type of defib unit patient who receive shock from any provider; lay or professional patient's who are treated in prehospital setting EMS Medical Records	ecei tting <b>EM</b>	ve one or more defibrillatory  ISA Data Elements  EMSA#	
Population Subset Numerator (N) Numerator  Numerator Description of Indicator	Inc	personnel event was in prehospital setting specified query time period  S Medical Records the number of patients who r shocks in the Prehospital set  Iusion Criteria patients who receive shock from any type of defib unit patient who receive shock from any provider; lay or professional patient's who are treated in prehospital setting  EMS Medical Records numerator value (N) divided	eceiting EM	EMSA # ve one or more defibrillatory  ISA Data Elements	
Population Subset Numerator (N) Numerator Numerator	EM DINC	personnel event was in prehospital setting specified query time period S Medical Records the number of patients who r shocks in the Prehospital set lusion Criteria patients who receive shock from any type of defib unit patient who receive shock from any provider; lay or professional patient's who are treated in prehospital setting EMS Medical Records	eceiting EM	ve one or more defibrillatory  ISA Data Elements  EMSA#	

Linkage	Li	nkage Options	EN	ISA Data Elements
		name		EMSA #
		dob		EMSA #
		age		EMSA#
		gender		EMSA #
		admit date		EMSA #
		procedures		EMSA #
Stratification		Options		EMSA Data Elements
		by age		EMSA #
		by gender		EMSA #
		by incident type		EMSA #
		by response times		EMSA #
		by scene times		EMSA #
		by provider level		EMSA #
Indicator Exclusion Criteria		non-cardiac etiologies,		
		cardiac etiologies where puls		
		event was not witnessed by		
		event not treated by EMS pe		
References		Utstein Model; Pitt, Penn Kas		
		•		Utstein Model applied to Rural-
	_	Suburban EMS System. Ann		
		Wisconsin study; Olson DW,		
	_	Wisconsin Experience;. Ann		
		Seattle Washington; Weaver		
		Improving Survival from Out		•
	_	Ann of Emerg Med 15:10;118		
			Car	diac Arrest in Ontario; Can Med
0	L.	Assoc J; 191-199, 1992		
Source		California EMSA Vision Proje	ect	

CORE INDICATOR INDEX # CA2F	PULSE	LESS V-FIB or V-T	ACI	H - WITNESSED
Measure	Prehosp Patient	ital Defibrillation: Num	ber	of Shocks Delivered per
CORE INDICATOR REF #CA1	-	C - ADULT ENT PROTOCOL UTIL	IZAT	ION
Objective	□ to m		ber	of shocks delivered per patient
	venti			t which is witnessed and
Classification		cal care - clinical		
Type of Measure	□ Proc	ess		
Domain of Performance	□ Pt Ca	are		
Indicator Reporting Value	□ %			
Display Format	□ List			
		e Chart		
	□ Bar (			
		Graph		
Fraguency of Diopley		ess Control Chart		
Frequency of Display Measures of Central		hly x 12 n - Yes		
		e - No		
Tendency		e - No nce - No		
		dard deviation - No		
Trending Analysis	□ NA	data acviation 140		
Minimum Data Values		alues per measure		
Sampling		odic - Rate		
Aggregation	□ Yes	rato rato		
Blinded	□ Yes			
Beta Testing		e to Date		
Population Denominator (D)			who	suffer a pulseless VF or VT
		t witnessed by EMS per	sonr	iel .
Denominator	Inclusio	n Criteria	EM	SA Data Elements
		nt has reached age 15 nt has suffered a VF		EMSA #36
	or V	Γevent <b>)</b>		EMSA #54VTAC, 54VFIB
		nt was pulseless ent VF or VT		EMSA #54C-A
	••	nt was in prehospital		EMSA #54
	<ul><li>patie</li><li>witne</li></ul>	nt VF & VT event was essed by EMS		EMSA #52
		onnel ified time period		EMSA #11
Denominator Data Source		Medical Records		
Population Subset Numerator (N)	□ the r	umber of shock delivere	d.	
Numerator	Inclusio	n Criteria	EN	ISA Data Elements
		ks delivered by a any		EMSA#
		of defib unit		
		ks delivered by any		
		on (professional or		
	non-	orofessional)		

		event witnessed by EMS		
		personnel		
		subset of denominator		
		same time period as		
		denominator		
Numerator Data Source		EMS Medical Records		
Description of Indicator		numerator value (N) divided	by d	enominator value (D) multiplied
Formula		by 100 equals percentage (%	5)	
Indicator Formula		N / D = %		
Numeric Expression				
Linkage	Lir	nkage Options	EN	ISA Data Elements
		name		EMSA #29
		dob		EMSA #35
		age .		EMSA #36
		gender		EMSA #38
		admit date		EMSA # ?
		procedures		EMSA #73
Stratification		Options		EMSA Data Elements
		by age		EMSA #36
		by gender		EMSA #38 EMSA #8
		by incident type		
		by response times by scene times		
		by provider level		
Indicator Exclusion Criteria		non-cardiac etiologies,	_	LIVIOA #
Indicator Exclusion Criteria		cardiac etiologies where resu	ıe cit	ation was not attempted by
	_	EMS personnel	iscit	ation was not attempted by
		event not witnessed by EMS	per	rsonnel
		patient has not survived to he		
References		Utstein Model; Pitt, Penn Kas		
				Utstein Model applied to Rural-
		Suburban EMS System. Ann		
		Wisconsin study; Olson DW,		
		Wisconsin Experience;. Ann	of E	merg Med, 18:8;806. 1989
		Seattle Washington; Weaver	DW	, MD. Considerations for
		Improving Survival from Out		
		Ann of Emerg Med 15:10;118		
			Car	diac Arrest in Ontario; Can Med
		Assoc J; 191-199, 1992		
Source		California EMSA Vision Proje	ct	

CORE INDICATOR INDEX # CA2G	Pl	PULSELESS V-FIB or V-TACH - WITNESSED			
Measure	Pre	ehospital Defibrillation: Des	ired	Effect Achieved	
CORE INDICATOR REF #CA1		RDIAC - ADULT EATMENT PROTOCOL UTIL	.IZA	TION	
Objective		to measure % of patients wh effect from one or more defib			
		Fib/Tach – witnessed in the I			
Classification		medical care - clinical		,	
Type of Measure		outcome			
Domain of Performance		Effectiveness			
Indicator Reporting Value		%			
Display Format		Bar Chart			
Fraguency of Display		Line Graph			
Frequency of Display Measures of Central		Monthly x 12 mean - Yes			
Tendency		mode - No			
Tolladiloy		variance - No			
		standard deviation - No			
Trending Analysis		NA			
Minimum Data Values		30 values per measure			
Sampling		Periodic - Rate			
Aggregation		Yes			
Blinded		Yes			
Beta Testing		None to Date		#	
Population Denominator (D)		the number of adult patients event witnessed and are sho			
Denominator	Inc	clusion Criteria	EN	ISA Data Elements	
		patient has reached age 15		EMSA #36	
		patient has suffered a VF			
		patient has suffered a VF or VT event)	<u> </u>	EMSA #54VTAC, 54VFIB	
		patient has suffered a VF or VT event) patient was pulseless		EMSA #54VTAC, 54VFIB EMSA #54C-A	
		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital			
		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting	<u> </u>	EMSA #54C-A EMSA #54	
	_	patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting patient VF & VT event was witnessed by EMS	<u> </u>	EMSA #54C-A EMSA #54	
		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting patient VF & VT event was witnessed by EMS personnel	<u> </u>	EMSA #54C-A EMSA #54 EMSA #52	
		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting patient VF & VT event was witnessed by EMS personnel pt was shocked by any	0	EMSA #54C-A EMSA #54	
		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting patient VF & VT event was witnessed by EMS personnel pt was shocked by any type of defib unit patient was shocked one or	0	EMSA #54C-A EMSA #54 EMSA #52	
		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting patient VF & VT event was witnessed by EMS personnel pt was shocked by any type of defib unit patient was shocked one or more times	0	EMSA #54C-A EMSA #54 EMSA #52	
		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting patient VF & VT event was witnessed by EMS personnel pt was shocked by any type of defib unit patient was shocked one or more times specified time period	0	EMSA #54C-A EMSA #54 EMSA #52	
Denominator Data Source		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting patient VF & VT event was witnessed by EMS personnel pt was shocked by any type of defib unit patient was shocked one or more times	0	EMSA #54C-A EMSA #54 EMSA #52	
Denominator Data Source		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting patient VF & VT event was witnessed by EMS personnel pt was shocked by any type of defib unit patient was shocked one or more times specified time period	0	EMSA #54C-A EMSA #54 EMSA #52	
		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting patient VF & VT event was witnessed by EMS personnel pt was shocked by any type of defib unit patient was shocked one or more times specified time period		EMSA #54C-A EMSA #54 EMSA #52 EMSA #11	
Denominator Data Source Population Subset Numerator (N)		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting patient VF & VT event was witnessed by EMS personnel pt was shocked by any type of defib unit patient was shocked one or more times specified time period		EMSA #54C-A EMSA #54 EMSA #52	
Population Subset		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting patient VF & VT event was witnessed by EMS personnel pt was shocked by any type of defib unit patient was shocked one or more times specified time period IS Medical Records  the number of patients where one or more shocks		EMSA #54C-A  EMSA #54  EMSA #52  EMSA #11  desired effect is achieved from	
Population Subset Numerator (N)		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting patient VF & VT event was witnessed by EMS personnel pt was shocked by any type of defib unit patient was shocked one or more times specified time period IS Medical Records  the number of patients where one or more shocks  clusion Criteria patient's who are treated in		EMSA #54C-A EMSA #54 EMSA #52 EMSA #11	
Population Subset Numerator (N)		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting patient VF & VT event was witnessed by EMS personnel pt was shocked by any type of defib unit patient was shocked one or more times specified time period  IS Medical Records  the number of patients where one or more shocks  slusion Criteria patient's who are treated in prehospital setting		EMSA #54C-A  EMSA #54  EMSA #52  EMSA #11  desired effect is achieved from	
Population Subset Numerator (N)		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting patient VF & VT event was witnessed by EMS personnel pt was shocked by any type of defib unit patient was shocked one or more times specified time period  IS Medical Records  the number of patients where one or more shocks  slusion Criteria patient's who are treated in prehospital setting Desired effect is any		EMSA #54C-A  EMSA #54  EMSA #52  EMSA #11  desired effect is achieved from	
Population Subset Numerator (N)		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting patient VF & VT event was witnessed by EMS personnel pt was shocked by any type of defib unit patient was shocked one or more times specified time period  IS Medical Records  the number of patients where one or more shocks  slusion Criteria patient's who are treated in prehospital setting Desired effect is any change in patient status		EMSA #54C-A  EMSA #54  EMSA #52  EMSA #11  desired effect is achieved from	
Population Subset Numerator (N)		patient has suffered a VF or VT event) patient was pulseless (patient VF or VT event was in prehospital setting patient VF & VT event was witnessed by EMS personnel pt was shocked by any type of defib unit patient was shocked one or more times specified time period  IS Medical Records  the number of patients where one or more shocks  slusion Criteria patient's who are treated in prehospital setting Desired effect is any		EMSA #54C-A  EMSA #54  EMSA #52  EMSA #11  desired effect is achieved from	

Numerator Data Source Description of Indicator Formula		desired effect is reported by EMS personnel through observation, assessment or by verbal questioning of patient. EMS Medical Records numerator value (N) divided by 100 equals percentage (%	-	enominator value (D) multiplied
Indicator Formula		N / D = %	,	
Numeric Expression				
Linkage		kage Options		SA Data Elements
	00000	name dob age gender admit date procedures		EMSA #29 EMSA #35 EMSA #36 EMSA #38 EMSA # ? EMSA #73
Stratification		Options		EMSA Data Elements
		by age by gender by incident type by response times by scene times by number of defibrillations by provider level		EMSA #36 EMSA #38 EMSA #8 EMSA #17-20 EMSA #8 EMSA #73 (99.62)
Indicator Exclusion Criteria		non-cardiac etiologies, cardiac etiologies where defil personnel events where desired effect r event not witnessed by EMS patient has not survived to he	not a pers	chieved sonnel
References	0 0 0	Utstein Model; Pitt, Penn Kas Prehospital Cardiac Arrest: T Suburban EMS System. And Wisconsin study; Olson DW, Wisconsin Experience;. Ann Seattle Washington; Weaver Improving Survival from Out Ann of Emerg Med 15:10;118	s LE he U n of E MD. of E DW, of H	E. One Year Survival after Utstein Model applied to Rural- Emerg Med; 12:17-20, 1994 EMT-Defibrillation: The merg Med, 18:8;806. 1989 MD. Considerations for ospital Cardiac Arrest.
Source		California EMSA Vision Proje	ct	

CORE INDICATOR Index # CA2H	PULSELESS V-FIB/TACH WIT	NESSED			
Measure	Epinephrine: Frequency of Ad	ministration			
CORE INDICATOR REF #CA1	CARDIAC - ADULT TREATMENT PROTOCOL UTIL	IZATION			
Objective		ffering from pulseless V-Fib/Tach-			
	witnessed who receive epine	ephrine in pre-hospital setting.			
Classification	☐ Medical care - clinical				
Type of Measure	□ Process				
Domain of Performance Indicator Reporting Value	☐ Frequency, Compliance☐ %				
Display Format	List Chart				
2.000.00	□ Cube Chart				
	□ Bar Chart				
	□ Line Graph				
Francisco of Displace	Process Control Chart     Manth Land 10				
Frequency of Display Measures of Central	☐ Monthly x 12 ☐ mean - Yes				
Tendency	mode - No				
Tollaciley	□ variance - No				
	standard deviation - No				
Trending Analysis	□ NA				
Minimum Data Values	□ 30 values per measure				
Sampling					
Aggregation	□ Yes				
Blinded	☐ Yes				
Beta Testing Population Denominator (D)	<ul><li>None to Date</li><li>the number of adult patients</li></ul>	who suffer a pulseless V-Fib/Tach			
Population Denominator (D)	event - witnessed in Prehosp				
Denominator	Inclusion Criteria	EMSA Data Elements			
	□ patient has reached age 15	□ EMSA#			
	□ patient treated by EMS				
	personnel for pulseless V-	□ EMSA #			
	Fib/Tach.  event was witnessed by	□ EMSA#			
	EMS personnel in	□ EMSA#			
	prehospital setting				
	□ specified query time period	□ EMSA#			
Denominator Data Source	□ EMS Medical Records				
Population Subset	☐ the number of patients who r	receive epinephrine			
Numerator (N)					
Numerator	Inclusion Criteria	EMSA Data Elements			
	<ul><li>patient's who are treated in prehospital setting</li></ul>	□ EMSA#			
	prenospital setting  patients who receive one				
	or more doses of				
	epinephrine				
	□ subset of denominator				
Numerator Data Source	□ EMS Medical Records				
Description of Indicator	` '	by denominator value (D) multiplied			
Formula Indicator Formula	by 100 equals percentage (%	<sup>(0)</sup>			
Numeric Expression	IN / D = /0				
Linkage	Linkage Options	EMSA Data Elements			
	□ name	□ EMSA#			

	dob		EMSA #
	age		EMSA #
	gender		EMSA #
	admit date		EMSA #
	procedures		EMSA #
Stratification	Options		EMSA Data Elements
	by age		EMSA #
	by gender		EMSA #
	by incident type		EMSA #
	by response times		EMSA #
	by scene times		EMSA #
	by provider level		EMSA #
			EMSA #
Indicator Exclusion Criteria	non-cardiac etiologies,		
	cardiac etiologies where pati-	ent r	not resuscitated by EMS
	personnel		
	event not witnessed by EMS	pers	sonnel
	event not treated by EMS pe		
References	Utstein Model; Pitt, Penn Kas		
			Utstein Model applied to Rural-
	Suburban EMS System. Ann		
	Wisconsin study; Olson DW,		
	Wisconsin Experience;. Ann		
	Seattle Washington; Weaver		
			ospital Cardiac Arrest.Ann of
	Emerg Med 15:10;1181, 198		
		Car	diac Arrest in Ontario; Can Med
	Assoc J; 191-199, 1992		
Source	California EMSA Vision Proje	ect	

CORE INDICATOR INDEX # CA2I	PU	ILSELESS V-FIB or V-T	AC	H - WITNESSED	
Measure	Еp	inephrine: Desired Effe	ect /	Achieved	
CORE INDICATOR REF		RDIAC - ADULT			
#CA1	_	EATMENT PROTOCOL UTIL	IZAT	TION	
Objective				g from pulseless V-Fib/Tach –	
	-			d therapeutic effect from the	
		administration of epinephrine			
Classification		Medical care - clinical	P	g.	
Type of Measure		Outcome			
Domain of Performance	-	Effectiveness			
Indicator Reporting Value		%			
Display Format		List Chart			
Display Format		Cube Chart			
		Bar Chart			
	_				
Frague variet Diamin					
Frequency of Display		Monthly x 12			
Measures of Central		mean - Yes			
Tendency		mode - No			
		variance - No			
		standard deviation - Yes			
Trending Analysis		NA			
Minimum Data Values		30 values per measure			
Sampling		Periodic - Rate			
Aggregation		Yes			
Blinded		Yes			
Beta Testing		None to Date			
Population Denominator (D)		the number of adult patients	trea	ted by EMS personnel for	
r opalation bonominator (b)	_	pulseless V-Fib/Tach - witnes			
		•			
Denominator	Inc	lusion Criteria	EN	ISA Data Elements	
Denominator					
Denominator		patient has reached age 15	EN	EMSA #	
Denominator		patient has reached age 15 patient treated by EMS	0	EMSA #	
Denominator		patient has reached age 15 patient treated by EMS personnel for pulseless V-		EMSA #	
Denominator		patient has reached age 15 patient treated by EMS personnel for pulseless V-Fib/Tach -witnessed.	0	EMSA #	
Denominator		patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive		EMSA # EMSA # EMSA #	
Denominator		patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality		EMSA #	
Denominator		patient has reached age 15 patient treated by EMS personnel for pulseless V-Fib/Tach -witnessed. patients who receive epinephrine any modality or device.		EMSA # EMSA # EMSA #	
Denominator		patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital		EMSA # EMSA # EMSA #	
Denominator		patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting		EMSA # EMSA # EMSA #	
		patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period		EMSA # EMSA # EMSA #	
Denominator Data Source		patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records		EMSA # EMSA # EMSA # EMSA # EMSA #	
Denominator Data Source Population Subset		patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records the number of patients who r	ecei	EMSA # EMSA # EMSA # EMSA # EMSA # EMSA #	
Denominator Data Source Population Subset Numerator (N)		patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records the number of patients who r effect is achieved in the Preh	ecei	EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #	
Denominator Data Source Population Subset	BM C	patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records the number of patients who r effect is achieved in the Preh	ecei	EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  ve epinephrine where a desired ital setting  ISA Data Elements	
Denominator Data Source Population Subset Numerator (N)		patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records the number of patients who r effect is achieved in the Pref lusion Criteria patient's who are treated in	ecei	EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #	
Denominator Data Source Population Subset Numerator (N)	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records the number of patients who r effect is achieved in the Pref lusion Criteria patient's who are treated in prehospital setting	ecei	EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  ve epinephrine where a desired ital setting  ISA Data Elements	
Denominator Data Source Population Subset Numerator (N)	BM C	patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records the number of patients who r effect is achieved in the Preh lusion Criteria patient's who are treated in prehospital setting Desired effect is any	ecei	EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  ve epinephrine where a desired ital setting  ISA Data Elements	
Denominator Data Source Population Subset Numerator (N)	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records the number of patients who r effect is achieved in the Preh lusion Criteria patient's who are treated in prehospital setting Desired effect is any change in patient status	ecei	EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  ve epinephrine where a desired ital setting  ISA Data Elements	
Denominator Data Source Population Subset Numerator (N)	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records the number of patients who r effect is achieved in the Preh lusion Criteria patient's who are treated in prehospital setting Desired effect is any change in patient status where there is full or partial	ecei	EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  ve epinephrine where a desired ital setting  ISA Data Elements	
Denominator Data Source Population Subset Numerator (N)	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records the number of patients who r effect is achieved in the Prer lusion Criteria patient's who are treated in prehospital setting Desired effect is any change in patient status where there is full or partial relief of symptoms	ecei	EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  ve epinephrine where a desired ital setting  ISA Data Elements	
Denominator Data Source Population Subset Numerator (N)	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records the number of patients who r effect is achieved in the Prer lusion Criteria patient's who are treated in prehospital setting Desired effect is any change in patient status where there is full or partial relief of symptoms desired effect is reported	ecei	EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  ve epinephrine where a desired ital setting  ISA Data Elements	
Denominator Data Source Population Subset Numerator (N)	EM	patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records the number of patients who r effect is achieved in the Prer lusion Criteria patient's who are treated in prehospital setting Desired effect is any change in patient status where there is full or partial relief of symptoms desired effect is reported by EMS personnel through	ecei	EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  ve epinephrine where a desired ital setting  ISA Data Elements	
Denominator Data Source Population Subset Numerator (N)	EM	patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records the number of patients who r effect is achieved in the Prer lusion Criteria patient's who are treated in prehospital setting Desired effect is any change in patient status where there is full or partial relief of symptoms desired effect is reported	ecei	EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  ve epinephrine where a desired ital setting  ISA Data Elements	
Denominator Data Source Population Subset Numerator (N)	EM	patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records the number of patients who r effect is achieved in the Prer lusion Criteria patient's who are treated in prehospital setting Desired effect is any change in patient status where there is full or partial relief of symptoms desired effect is reported by EMS personnel through	ecei	EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  ve epinephrine where a desired ital setting  ISA Data Elements	
Denominator Data Source Population Subset Numerator (N)	EM	patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records the number of patients who r effect is achieved in the Preh lusion Criteria patient's who are treated in prehospital setting Desired effect is any change in patient status where there is full or partial relief of symptoms desired effect is reported by EMS personnel through observation, assessment	ecei	EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  ve epinephrine where a desired ital setting  ISA Data Elements	
Denominator Data Source Population Subset Numerator (N)	EM	patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records the number of patients who r effect is achieved in the Preh lusion Criteria patient's who are treated in prehospital setting Desired effect is any change in patient status where there is full or partial relief of symptoms desired effect is reported by EMS personnel through observation, assessment or by verbal questioning of	ecei	EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  ve epinephrine where a desired ital setting  ISA Data Elements	
Denominator Data Source Population Subset Numerator (N)	EM D	patient has reached age 15 patient treated by EMS personnel for pulseless V- Fib/Tach -witnessed. patients who receive epinephrine any modality or device. event was in prehospital setting specified query time period S Medical Records the number of patients who r effect is achieved in the Preh lusion Criteria patient's who are treated in prehospital setting Desired effect is any change in patient status where there is full or partial relief of symptoms desired effect is reported by EMS personnel through observation, assessment or by verbal questioning of patient.	ecei	EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  ve epinephrine where a desired ital setting  ISA Data Elements	

Description of Indicator		numerator value (N) divided by denominator value (D) multiplied		
Formula		by 100 equals percentage (%)		
Indicator Formula		N / D = %		
Numeric Expression				
Linkage	Lir	nkage Options	EN	ISA Data Elements
		name		EMSA #
		dob		EMSA #
		age		EMSA #
		gender		EMSA #
		admit date		EMSA #
		procedures		EMSA #
Stratification		Options		EMSA Data Elements
		by age		EMSA #
		by gender		EMSA #
		by incident type		EMSA #
		by response times		EMSA #
		by scene times		EMSA #
		by provider level		EMSA #
				EMSA #
Indicator Exclusion Criteria		non-cardiac etiologies,		
		cardiac etiologies where cardiac chest pain was not chief		
	_	compliant		
		event not witnessed by EMS personnel		
		epinephrine not administered		
		desired effect from epinephri		•
D. C		event not treated by EMS pe		
References				
		Prehospital Cardiac Arrest: The Utstein Model applied to Rural-		
		Suburban EMS System. Ann of Emerg Med; 12:17-20, 1994		
		Wisconsin study; Olson DW, MD. EMT-Defibrillation: The Wisconsin Experience;. Ann of Emerg Med, 18:8;806. 1989		
		Seattle Washington; Weaver		
		Improving Survival from Out		
		Ann of Emerg Med 15:10;118		
				diac Arrest in Ontario; Can Med
	J	Assoc J; 191-199, 1992	Jan	diac Arrest in Oritario, Cari Meu
Source		California EMSA Vision Proje	act	
			<b>7</b> 01	

CORE INDICATOR Index # CA2J	PULSELESS V-FIB/TACH UNWITNESSED				
Measure	Lidocaine: Frequency of Administration				
CORE INDICATOR REF	CARDIAC - ADULT TREATMENT PROTOCOL UTIL				
Objective		fering from pulseless V-Fib/Tach –			
Chjodivo	witnessed who receive Lidoo	• •			
Classification	■ Medical care - clinical				
Type of Measure	□ Process				
Domain of Performance	□ Frequency, Compliance				
Indicator Reporting Value	□ %				
Display Format	□ List Chart				
	□ Cube Chart				
	☐ Bar Chart				
	□ Line Graph				
	□ Process Control Chart				
Frequency of Display	☐ Monthly x 12				
Measures of Central	mean - Yes				
Tendency	□ mode - No □ variance - No				
	<ul><li>variance - No</li><li>standard deviation - No</li></ul>				
Trending Analysis	□ NA				
Minimum Data Values	□ 30 values per measure				
Sampling	☐ Periodic - Rate				
Aggregation	☐ Yes				
Blinded	☐ Yes				
Beta Testing	☐ None to Date				
Population Denominator (D)		treated by EMS personnel for			
r opulation benominator (b)	□ the number of adult patients treated by EMS personnel for pulseless V-Fib/Tach - witnessed.				
Denominator	Inclusion Criteria	EMSA Data Elements			
	□ patient has reached age 15	□ EMSA#			
	<ul><li>patient treated by EMS</li></ul>	□ EMSA#			
	personnel for pulseless V-	□ EMSA#			
	Fib/Tach -witnessed	□ EMSA#			
	<ul><li>event was in prehospital</li></ul>	□ EMSA#			
	setting				
Domaminatas Data Causas	specified query time period				
Denominator Data Source	□ EMS Medical Records				
Population Subset	☐ the number of patients who r	eceive Lidocaine in the Prehospital			
Numerator (N)	setting				
Numerator	Inclusion Criteria EMSA Data Elements				
	patient's who are treated in	□ EMSA#			
	prehospital setting				
	<ul><li>patients who receive one</li></ul>				
	or more doses of Lidocaine				
	□ Subset of denominator				
	u time period for query match				
Normanatan Data O	denominator				
Numerator Data Source	□ EMS Medical Records	by denominator value (D) and the U. I.			
Description of Indicator	, ,	by denominator value (D) multiplied			
Formula	by 100 equals percentage (%	0)			
Indicator Formula Numeric Expression	□ N/D=%				
Linkage	Linkage Options	EMSA Data Elements			
Linkage	name	□ EMSA #			
	_ namo				

	dob		EMSA #
	age		EMSA #
	gender		EMSA #
	admit date		EMSA #
	procedures		EMSA #
Stratification	Options		EMSA Data Elements
	by age		EMSA #
	by gender		EMSA #
	by incident type		EMSA #
	by response times		EMSA #
	by scene times		EMSA #
	by provider level		EMSA #
			EMSA #
Indicator Exclusion Criteria	non-cardiac etiologies,		
	event not witnessed by EMS	pers	sonnel
	event not treated by EMS personnel		
References	Utstein Model; Pitt, Penn Kas	s LE	E. One Year Survival after
	Prehospital Cardiac Arrest: T	he l	Jtstein Model applied to Rural-
	Suburban EMS System. Ann	n of	Emerg Med; 12:17-20, 1994
	Wisconsin study; Olson DW,	MD	. EMT-Defibrillation: The
	Wisconsin Experience;. Ann	of E	merg Med, 18:8;806. 1989
	Seattle Washington; Weaver	DW	, MD. Considerations for
	Improving Survival from Out	of H	ospital Cardiac Arrest.
	Ann of Emerg Med 15:10;118	31, 1	986.
	Ontario, Canada; Brison RJ.	Card	diac Arrest in Ontario; Can Med
	Assoc J; 191-199, 1992		
Source	California EMSA Vision Proje	ct	

CORE INDICATOR INDEX # CA2K	PULSELESS V-FIB or V-TACH - WITNESSED				
Measure	Lidocaine: Desired Effect Achieved				
CORE INDICATOR REF #CA1	CARDIAC - ADULT TREATMENT PROTOCOL UTILI	CARDIAC - ADULT TREATMENT PROTOCOL UTILIZATION			
Objective		fering from pulseless V-Fib/Tach –			
		esired therapeutic effect from the			
Classification	administration of Lidocaine in Medical care - clinical	r pre-nospital setting.			
Type of Measure	Outcome				
Domain of Performance	□ Effectiveness				
Indicator Reporting Value	□ %				
Display Format	□ List Chart				
	□ Cube Chart				
	□ Bar Chart				
Fraguency of Diopley	☐ Line Graph☐ Monthly x 12				
Frequency of Display Measures of Central	☐ Monthly x 12 ☐ mean - Yes				
Tendency	mode - No				
	□ variance - No				
	<ul><li>standard deviation - Yes</li></ul>				
Trending Analysis	□ NA				
Minimum Data Values	□ 30 values per measure				
Sampling	Periodic - Rate				
Aggregation	□ Yes				
Blinded Pote Testing	☐ Yes☐ None to Date				
Population Denominator (D)		treated by EMS personnel for			
opulation benominator (b)	the number of adult patients treated by EMS personnel for pulseless V-Fib/Tach - witnessed.				
Denominator	Inclusion Criteria EMSA Data Elements				
	<ul><li>patient has reached age 15</li></ul>	□ EMSA#			
	patient treated by EMS	□ EMSA#			
	personnel for pulseless V- Fib/V-Tach -witnessed	□ EMSA # □			
	event was in prehospital	d LINOA#			
	setting	□ EMSA#			
	□ specified query time period				
		□ EMSA#			
Denominator Data Source	EMS Medical Records				
Population Subset Numerator (N)	the number of patients who receive Lidocaine and a desired effect is achieved in the Prehospital setting				
Numerator	Inclusion Criteria	EMSA Data Elements			
- Tumorator	patient's who are treated in	□ EMSA#			
	prehospital setting				
	<ul><li>event witnessed by EMS</li></ul>				
	personnel				
	□ Received one or more				
	Received one or more doses of Lidocaine				
	<ul><li>□ Received one or more doses of Lidocaine</li><li>□ Desired effect is any</li></ul>				
	<ul> <li>□ Received one or more doses of Lidocaine</li> <li>□ Desired effect is any change in patient status</li> </ul>				
	<ul><li>□ Received one or more doses of Lidocaine</li><li>□ Desired effect is any</li></ul>				
	Received one or more doses of Lidocaine Desired effect is any change in patient status where there is full or partial relief of symptoms desired effect is reported				
	Received one or more doses of Lidocaine Desired effect is any change in patient status where there is full or partial relief of symptoms desired effect is reported by EMS personnel through				
	Received one or more doses of Lidocaine Desired effect is any change in patient status where there is full or partial relief of symptoms desired effect is reported				

		patient.		
		Subset of denominator		
		Time period query match		
		denominator		
Numerator Data Source		EMS Medical Records		
Description of Indicator				enominator value (D) multiplied
Formula		by 100 equals percentage (%	5)	
Indicator Formula		N / D = %		
Numeric Expression				
Linkage	Lir	nkage Options	ΕN	ISA Data Elements
		name		EMSA #
		dob		EMSA #
		age		EMSA#
		gender		EMSA #
		admit date		EMSA #
		procedures		EMSA #
Stratification		Options		EMSA Data Elements
		by age		EMSA #
		by gender		EMSA #
		by incident type		EMSA #
		by response times		EMSA #
		by scene times		EMSA #
		by provider level		EMSA #
		, ,		
				EMSA #
Indicator Exclusion Criteria		non-cardiac etiologies,		
		V-Fib/Tach with pulseless		
		event not witnessed by EMS	pers	sonnel
		Lidocaine not administered b		
		desired effect from oxygen a		
		event not treated by EMS pe		
References		Utstein Model; Pitt, Penn Kas	s LE	E. One Year Survival after
				Itstein Model applied to Rural-
		Suburban EMS System. Ann of Emerg Med; 12:17-20, 1994		
		Wisconsin study; Olson DW,		
		Wisconsin Experience;. Ann		
		Seattle Washington; Weaver		
		Improving Survival from Out		
		Ann of Emerg Med 15:10;118		
				diac Arrest in Ontario; Can Med
	_	Assoc J; 191-199, 1992	Cart	alac Alicsi III Olitalio, Call Meu
Source		California EMSA Vision Proje	ect	
Source	_	Camorna Livion Vision Fluje	·Οι	

CORE INDICATOR INDEX #CA2L	PULSELESS V-FIB or V-TACH - WITNESSED			
Measure	Return of Spontaneous Circulation (ROSC)			
CORE INDICATOR REF #CA1	CARDIAC - ADULT TREATMENT PROTOCOL UTIL	LIZATION		
Objective	circulation (ROSC) after suff	tachycardia (VT) event which is		
Classification	medical care - clinical			
Type of Measure	□ outcome			
Domain of Performance	□ Effectiveness			
Indicator Reporting Value	<u> </u>			
Display Format	□ Bar Chart			
Eroguenov of Dionics	☐ Line Graph			
Frequency of Display Measures of Central	☐ Monthly x 12 ☐ mean - Yes			
Tendency	□ mean - Yes □ mode - No			
rendency	□ variance - No			
	standard deviation - No			
Trending Analysis	□ NA			
Minimum Data Values	☐ 30 values per measure			
Sampling	□ Periodic - Rate			
Aggregation	□ Yes			
Blinded	□ Yes			
Beta Testing	□ None to Date			
Population Denominator (D)	the number of adult patients who suffer a pulseless VF or VT event witnessed by EMS personnel			
Denominator	Inclusion Criteria EMSA Data Elements			
	patient has reached age 15	□ EMSA #36		
	□ patient has suffered a VF			
	or VT event)	□ EMSA #54VTAC, 54VFIB		
	□ patient was pulseless (patient VF or VT	□ EMSA #54C-A		
	<ul><li>event was in prehospital setting</li></ul>	□ EMSA #54		
	<ul><li>patient VF &amp; VT event was witnessed by EMS personnel</li></ul>	□ EMSA #52		
	<ul><li>specified time period</li></ul>	□ EMSA #11		
Denominator Data Source	□ EMS Medical Records			
Population Subset	☐ the number of patients who	have ROSC		
Numerator (N)	· '			
Numerator	Inclusion Criteria	EMSA Data Elements		
	<ul><li>□ patients who survive to</li><li>ROSC</li><li>□ ROSC is the return of</li></ul>	□ EMSA#		
	spontaneous circulation by the patient as evidenced by a pulse at any site for any period of time after the			

_				
		initial absence of a pulse		
		was determined by EMS		
	_	personnel		
		event occurred in		
		Prehospital setting		
		Subset of denominator		
		Time period query match		
		denominator		
Numerator Data Source		EMS Medical Records		
Description of Indicator		• •	-	enominator value (D) multiplied
Formula		by 100 equals percentage (%	5)	
Indicator Formula		N / D = %		
Numeric Expression				
Linkage	Lir	nkage Options	EN	ISA Data Elements
		name		EMSA #29
		dob		EMSA #35
		age		EMSA #36
		gender		EMSA #38
		admit date		EMSA# ?
		procedures		EMSA #73
Stratification		Options		EMSA Data Elements
		by age		EMSA #36
		by gender		EMSA #38
		by incident type		EMSA #8
		by response times		EMSA #17-20
		by scene times		EMSA #8
		by number of defibrillations		EMSA #73 (99.62)
		by provider level		
				EMSA #25
Indicator Exclusion Criteria		non-cardiac etiologies,		
		cardiac etiologies where resu	ıscit	ation was not attempted by
		EMS personnel		
		event not witnessed by EMS		
		patient has not survived to he		
References		Utstein Model; Pitt, Penn Ka		
				Utstein Model applied to Rural-
		Suburban EMS System. Ann		
		Wisconsin study; Olson DW,		
	_	Wisconsin Experience;. Ann		
		Seattle Washington; Weaver		
		Improving Survival from Out		
	_	Ann of Emerg Med 15:10;118		
			Card	diac Arrest in Ontario; Can Med
	_	Assoc J; 191-199, 1992		
Source		California EMSA Vision Proje	ct	

CORE INDICATOR INDEX #CA2	PULSELESS V-FIB or V-TACH - WITNESSED				
Measure	Admit to Emergency Department				
CORE INDICATOR REF #CA1	CARDIAC - ADULT	CARDIAC - ADULT TREATMENT PROTOCOL UTILIZATION			
Objective		who survive to emergency department			
J., 33		pulseless ventricular fibrillation (VF)			
	or ventricular tachycardia (	VT) event which is witnessed and			
	treated by EMS personnel				
Classification	medical care - clinical				
Type of Measure  Domain of Performance	<ul><li>outcome</li><li>Effectiveness</li></ul>				
Indicator Reporting Value	□ %				
Display Format	□ Cube Chart				
	□ Bar Chart				
	□ Line Graph				
Frequency of Display	☐ Monthly x 12				
Measures of Central	□ mean - Yes				
Tendency	□ mode - No □ variance - No				
	<ul><li>variance - No</li><li>standard deviation - Yes</li></ul>				
Trending Analysis	□ NA				
Minimum Data Values	☐ 30 values per measure				
Sampling	□ Periodic - Rate				
Aggregation	□ Yes				
Blinded	□ Yes				
Beta Testing	□ None to Date				
Population Denominator (D)		s who suffer a pulseless VF or VT			
Denominator	event witnessed by EMS personnel Inclusion Criteria EMSA Data Elements				
Benominator	morasion orneria	LINOA Bata Licinoitis			
	□ patient has reached age 15	5 🗅 EMSA #36			
	<ul><li>patient has suffered a VF</li></ul>				
	or VT event)	□ EMSA #54VTAC, 54VFIB			
	patient was pulseless	□ EMSA #54C-A			
	(patient VF or VT □ event was in prehospital	□ EMSA #54			
	<ul><li>event was in prehospital setting</li></ul>	LIVISA #54			
	patient VF & VT event was	□ EMSA #52			
	witnessed by EMS				
	personnel				
Damani i Di D	specified time period	☐ EMSA #11			
Denominator Data Source	<ul><li>EMS Medical Records</li><li>Hospital Admit Records</li></ul>				
	Hospital Admit Records				
Population Subset	☐ the number of patients who	survive to ED Admission			
Numerator (N)	·				
Numerator	Inclusion Criteria	EMSA Data Elements			
	patients who survive to ED	□ discharge status (TBD)			
	admit				
	□ Subset of Denominator				
	☐ Time period query match denominator				
Numerator Data Source	□ EMS Medical records				
Tumorator Data Course	hospital discharge records				
	□ OSHPD discharge record				

Description of Indicator		numerator value (N) divided by denominator value (D) multiplied		
Formula		by 100 equals percentage (%)		
Indicator Formula		N / D = %		
Numeric Expression				
Linkage	Lir	nkage Options	EN	ISA Data Elements
		name		EMSA #29
		dob		EMSA #35
		age		EMSA #36
		gender		EMSA #38
		admit date		EMSA#?
		procedures		EMSA #73
Stratification		Options		EMSA Data Elements
		by age		EMSA #36
		by gender		EMSA #38
		by incident type		EMSA #8
		by response times		EMSA #17-20
		by scene times		EMSA #8
		by number of defibrillations		EMSA #73 (99.62)
		by provider level		EN40A #05
				EMSA #25
Indicator Exclusion Criteria		non-cardiac etiologies,		
		cardiac etiologies where resuscitation was not attempted by		
		EMS personnel		
		event not witnessed by EMS personnel		
References	-	patient has not survived to hospital discharge  Utstein Model; Pitt, Penn Kass LE. One Year Survival after		
References	"			Utstein Model applied to Rural-
		•		• •
		Suburban EMS System. Ann of Emerg Med; 12:17-20, 1994 Wisconsin study; Olson DW, MD. EMT-Defibrillation: The		
		Wisconsin Study, Olson DW, MD. EMT-Delibilitation. The Wisconsin Experience;. Ann of Emerg Med, 18:8;806. 1989		
		Seattle Washington; Weaver		-
		Improving Survival from Out		
		Ann of Emerg Med 15:10;118		
		Ontario, Canada; Brison RJ. Cardiac Arrest in Ontario; Can Med		
				diac Arrest in Ontario: Can Med
	-			diac Arrest in Ontario; Can Med

CORE INDICATOR INDEX #CA2N	PULSELESS V-FIB or V-TACH - WITNESSED				
Measure	Survival to Hospital Discharge				
CORE INDICATOR REF #CA1	CARDIAC - ADULT TREATMENT PROTOCOL UTIL	CARDIAC - ADULT TREATMENT PROTOCOL UTILIZATION			
Objective	suffering a pulseless ventricu tachycardia (VT) event which personnel	o survive to hospital discharge after ular fibrillation (VF) or ventricular n is witnessed and treated by EMS			
Classification	<ul><li>medical care - clinical</li></ul>				
Type of Measure	□ outcome				
Domain of Performance	□ Effectiveness				
Indicator Reporting Value	□ %				
Display Format	□ Bar Chart				
Eromionou of Dionion	Line Graph  Monthly v 13				
Frequency of Display Measures of Central	☐ Monthly x 12 ☐ mean - Yes				
Tendency	□ mode - No				
rendency	variance - No				
	standard deviation - No				
Trending Analysis	□ NA				
Minimum Data Values	□ 30 values per measure				
Sampling	□ Periodic - Rate				
Aggregation	☐ Yes				
Blinded	□ Yes				
Beta Testing	■ None to Date				
Population Denominator (D)		who suffer a pulseless VF or VT			
	event witnessed by EMS personnel				
Denominator	Inclusion Criteria	EMSA Data Elements			
	<ul> <li>patient has reached age 15</li> <li>patient has suffered a VF or VT event)</li> <li>patient was pulseless</li> </ul>	□ EMSA #36 □ EMSA #54VTAC, 54VFIB □ EMSA #54C-A			
	(patient VF or VT □ event was in prehospital setting	□ EMSA #54			
	patient VF & VT event was not witnessed by EMS personnel	□ EMSA #52			
	specified time period	□ EMSA #11			
Denominator Data Source	□ EMS Medical Records				
Population Subset Numerator (N)	u the number of patients who				
Numerator	Inclusion Criteria	EMSA Data Elements			
	<ul><li>patients who survive to hospital discharge</li><li>Subset of denominator</li></ul>	□ discharge status ( <b>TBD</b> )			
	<ul><li>Time period query match denominator</li></ul>				
Numerator Data Source	□ EMS Records				
	□ hospital discharge records				
Description of Indicator	OSHPD discharge record     numerator value (N) divided.	by denominator value (D) multiplied			
Description of Indicator	unmerator value (N) divided	by denominator value (D) multiplied			

Formula		by 100 equals percentage (%)			
Indicator Formula		N / D = %			
Numeric Expression					
Linkage	Lir	kage Options	EN	ISA Data Elements	
		name		EMSA #29	
		dob		EMSA #35	
		age		EMSA #36	
		gender		EMSA #38	
		admit date		EMSA#?	
		procedures		EMSA #73	
Stratification		Options		EMSA Data Elements	
		by age		EMSA #36	
		by gender		EMSA #38	
		by incident type		EMSA #8	
		by response times		EMSA #17-20	
		by scene times		EMSA #8	
		by number of defibrillations		EMSA #73 (99.62)	
		by provider level		EMSA #25	
Indicator Exclusion Criteria		non-cardiac etiologies,			
		cardiac etiologies where resu	ıscıt	ation was not attempted by	
	_	EMS personnel			
		event not witnessed by EMS	•		
	<u> </u>	patient has not survived to he			
References		Utstein Model; Pitt, Penn Kas			
				Utstein Model applied to Rural-	
	_	Suburban EMS System. Ann			
		Wisconsin study; Olson DW,			
	_	Wisconsin Experience; Ann of Emerg Med, 18:8;806. 1989			
		Improving Survival from Out		•	
		Ann of Emerg Med 15:10;118			
			Car	diac Arrest in Ontario; Can Med	
Source		Assoc J; 191-199, 1992	oct		
Source		California EMSA Vision Proje	UL		

CORE INDICATOR Index # CA3A	CHEST PAIN-SUSPECTED CARDIAC ORIGIN				
Measure	Oxygen: Frequency of Administration				
CORE INDICATOR REF #CA1	CARDIAC - ADULT TREATMENT PROTOCOL UTILI				
Objective		fering from chest pain of suspected			
	cardiac origin that receive ox	ygen in pre-hospital setting.			
Classification	Medical care - clinical				
Type of Measure  Domain of Performance	Process				
Indicator Reporting Value	☐ Frequency, Compliance ☐ %				
Display Format	☐ List Chart				
2.55	□ Cube Chart				
	□ Bar Chart				
	□ Line Graph				
	□ Process Control Chart				
Frequency of Display	Monthly x 12				
Measures of Central	□ mean - Yes □ mode - No				
Tendency	□ mode - No □ variance - No				
	standard deviation - No				
Trending Analysis	□ NA				
Minimum Data Values	☐ 30 values per measure				
Sampling	□ Periodic - Rate				
Aggregation	□ Yes				
Blinded	□ Yes				
Beta Testing	□ None to Date				
Population Denominator (D)		=			
Donominator	pain of suspected cardiac origin.  Inclusion Criteria EMSA Data Elements				
Denominator					
	patient has reached age 15	□ EMSA#			
	<ul><li>patient treated by EMS personnel for chest pain of</li></ul>	□ EMSA#			
	suspected cardiac origin.	□ EMSA#			
	event was in prehospital	LIVIO/ CIT			
	setting	□ EMSA#			
	<ul><li>specified query time period</li></ul>				
		□ EMSA#			
Denominator Data Source	□ EMS Medical Records				
Population Subset		eceive oxygen in the Prehospital			
Numerator (N)	setting Inclusion Criteria	EMCA Data Flaments			
Numerator		EMSA Data Elements  □ EMSA#			
	<ul><li>patient's who are treated in prehospital setting</li></ul>	□ EMSA#			
Numerator Data Source	□ EMS Medical Records	L			
Description of Indicator		by denominator value (D) multiplied			
Formula	by 100 equals percentage (%				
Indicator Formula Numeric Expression	□ N/D = %				
Linkage	Linkage Options	EMSA Data Elements			
ago	name	□ EMSA #			
	□ dob	□ EMSA#			
	□ age	□ EMSA#			
	□ gender	□ EMSA #			
	□ admit date	□ EMSA #			
	□ procedures	□ EMSA#			

Stratification	Options	EMSA Data Elements			
	□ by age	□ EMSA#			
	□ by gender	□ EMSA #			
	□ by incident type	□ EMSA #			
	□ by response times	□ EMSA #			
	□ by scene times	□ EMSA #			
	<ul><li>by provider level</li></ul>	□ EMSA# □ EMSA#			
Indicator Exclusion Criteria	□ non-cardiac etiologies,	LINIOA#			
marcator Exclusion orneria	□ cardiac etiologies where card	liac chest pain was not chief			
	compliant				
	<ul> <li>event not treated by EMS personnel</li> </ul>				
References	Abrams J: Nitroglycerine and	long-acting nitrates in clinical			
	practice. Am J Med 1983;74				
	American Heart Assn. Textbo	ook on Advanced Cardiac Life			
	Support, 3 <sup>rd</sup> Ed. Dallas: AHA				
		Acute Myocardial Infarction. Prog			
	Cardiovascular Disease 1979	,			
	□ Rackley CE: Modern Approa Heart J. 1981;22:107	ches to Myocardial Infarction. Am			
	•	ss LE. One Year Survival after			
		he Utstein Model applied to Rural-			
		n of Emerg Med; 12:17-20, 1994			
Source	<ul> <li>California EMSA Vision Proje</li> </ul>				
	CHEST PAIN-SUSPECTED CA	RDIAC ORIGIN			
CORE INDICATOR					
Index # CA3B					
Measure	Oxygen: Desired Effect Achiev	rod			
ivieasure	Oxygen. Desired Effect Achiev	<del>reu</del>			
CORE INDICATOR REF	CARDIAC - ADULT				
#CA1	TREATMENT PROTOCOL UTIL				
	TREATMENT PROTOCOL UTIL  to measure % of patients suf	fering from chest pain of suspected			
#CA1	TREATMENT PROTOCOL UTIL  to measure % of patients suffication cardiac origin that achieve a	fering from chest pain of suspected desired therapeutic effect from the			
#CA1 Objective	TREATMENT PROTOCOL UTIL  to measure % of patients suf cardiac origin that achieve a administration of oxygen in p	fering from chest pain of suspected desired therapeutic effect from the			
#CA1 Objective Classification	TREATMENT PROTOCOL UTIL  to measure % of patients suf cardiac origin that achieve a administration of oxygen in p  Medical care - clinical	fering from chest pain of suspected desired therapeutic effect from the			
#CA1 Objective  Classification Type of Measure	TREATMENT PROTOCOL UTIL  to measure % of patients suf cardiac origin that achieve a administration of oxygen in p  Medical care - clinical  Outcome	fering from chest pain of suspected desired therapeutic effect from the			
#CA1 Objective  Classification Type of Measure Domain of Performance	TREATMENT PROTOCOL UTIL  to measure % of patients suffication origin that achieve a administration of oxygen in position of the description of the	fering from chest pain of suspected desired therapeutic effect from the			
#CA1 Objective  Classification Type of Measure	TREATMENT PROTOCOL UTIL  to measure % of patients suf cardiac origin that achieve a administration of oxygen in p  Medical care - clinical  Outcome	fering from chest pain of suspected desired therapeutic effect from the			
#CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value	TREATMENT PROTOCOL UTIL  to measure % of patients suffication origin that achieve a administration of oxygen in position in the description of the	fering from chest pain of suspected desired therapeutic effect from the			
#CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value	TREATMENT PROTOCOL UTIL  to measure % of patients suffication origin that achieve a administration of oxygen in position of the process of th	fering from chest pain of suspected desired therapeutic effect from the			
#CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format	TREATMENT PROTOCOL UTIL  to measure % of patients sufficients cardiac origin that achieve a administration of oxygen in publication oxygen in publication of oxygen in publication oxygen in publicatio	fering from chest pain of suspected desired therapeutic effect from the			
#CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display	TREATMENT PROTOCOL UTIL  to measure % of patients sufficial cardiac origin that achieve a administration of oxygen in p  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12	fering from chest pain of suspected desired therapeutic effect from the			
#CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central	TREATMENT PROTOCOL UTIL  to measure % of patients sufficial cardiac origin that achieve a administration of oxygen in p  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12 mean - Yes	fering from chest pain of suspected desired therapeutic effect from the			
#CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display	TREATMENT PROTOCOL UTIL  to measure % of patients suffication origin that achieve a administration of oxygen in pure Medical care - clinical  Outcome Effectiveness  % List Chart Cube Chart Bar Chart Bar Chart Line Graph Monthly x 12 mean - Yes mode - No	fering from chest pain of suspected desired therapeutic effect from the			
#CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central	TREATMENT PROTOCOL UTIL  to measure % of patients suffication origin that achieve a administration of oxygen in publication.  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Bar Chart Line Graph Monthly x 12 mean - Yes mode - No variance - No	fering from chest pain of suspected desired therapeutic effect from the			
Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency	TREATMENT PROTOCOL UTIL  to measure % of patients suffication origin that achieve a administration of oxygen in pure Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12 mean - Yes mode - No variance - No standard deviation - Yes	fering from chest pain of suspected desired therapeutic effect from the			
#CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central	TREATMENT PROTOCOL UTIL  to measure % of patients suffication or origin that achieve a administration of oxygen in pure Medical care - clinical  Outcome  Effectiveness  Medical care - clinical  Cubcome  Effectiveness  Medical care - clinical  Moutcome  Medical care - clinical	fering from chest pain of suspected desired therapeutic effect from the			
Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis Minimum Data Values	TREATMENT PROTOCOL UTIL  to measure % of patients suf cardiac origin that achieve a administration of oxygen in p  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12 mean - Yes mode - No variance - No standard deviation - Yes  NA	fering from chest pain of suspected desired therapeutic effect from the			
Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis	TREATMENT PROTOCOL UTIL  to measure % of patients suf cardiac origin that achieve a administration of oxygen in p  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12 mean - Yes mode - No variance - No standard deviation - Yes  NA  30 values per measure	fering from chest pain of suspected desired therapeutic effect from the			
Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis Minimum Data Values Sampling	TREATMENT PROTOCOL UTIL  to measure % of patients suf cardiac origin that achieve a administration of oxygen in p  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12 mean - Yes mode - No variance - No standard deviation - Yes NA 30 values per measure Periodic - Rate	fering from chest pain of suspected desired therapeutic effect from the			
Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis Minimum Data Values Sampling Aggregation	TREATMENT PROTOCOL UTIL  to measure % of patients suf cardiac origin that achieve a administration of oxygen in p  Medical care - clinical  Outcome  Effectiveness  %  List Chart  Cube Chart  Bar Chart  Line Graph  Monthly x 12  mean - Yes  mode - No variance - No standard deviation - Yes  NA  30 values per measure  Periodic - Rate  Yes	fering from chest pain of suspected desired therapeutic effect from the			
Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis Minimum Data Values Sampling Aggregation Blinded	TREATMENT PROTOCOL UTIL  to measure % of patients suffication or origin that achieve a administration of oxygen in patients and ministration of oxygen in patients.  Medical care - clinical  Outcome  Effectiveness  %  List Chart  Cube Chart  Bar Chart  Line Graph  Monthly x 12  mean - Yes  mode - No  variance - No  standard deviation - Yes  NA  30 values per measure  Periodic - Rate  Yes  None to Date	fering from chest pain of suspected desired therapeutic effect from the			
Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis Minimum Data Values Sampling Aggregation Blinded Beta Testing	TREATMENT PROTOCOL UTIL  to measure % of patients suf cardiac origin that achieve a administration of oxygen in p  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12  mean - Yes mode - No variance - No standard deviation - Yes  NA  30 values per measure Periodic - Rate Yes  Yes None to Date the number of adult patients	fering from chest pain of suspected desired therapeutic effect from the re-hospital setting.			
Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis Minimum Data Values Sampling Aggregation Blinded Beta Testing Population Denominator (D)	TREATMENT PROTOCOL UTIL  to measure % of patients suf cardiac origin that achieve a administration of oxygen in p  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12 mean - Yes mode - No variance - No standard deviation - Yes NA  30 values per measure Periodic - Rate Yes None to Date the number of adult patients pain of suspected cardiac oritheir treatment.	fering from chest pain of suspected desired therapeutic effect from the re-hospital setting.  treated by EMS personnel for chest gin that receive oxygen as part of			
Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis Minimum Data Values Sampling Aggregation Blinded Beta Testing	TREATMENT PROTOCOL UTIL  to measure % of patients suf cardiac origin that achieve a administration of oxygen in p  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12 mean - Yes mode - No variance - No standard deviation - Yes  NA  30 values per measure Periodic - Rate Yes None to Date the number of adult patients pain of suspected cardiac ori	fering from chest pain of suspected desired therapeutic effect from the re-hospital setting.			

□ patient has reached age 15 □ EMSA # □ patient treated by EMS	
personnel for chest pain of	
suspected cardiac origin.	
patients who receive	
oxygen by any modality or device.	
event was in prehospital	
setting	
□ specified query time period	
Denominator Data Source EMS Medical Records	
Population Subset up the number of patients who receive oxygen where a desired	
Numerator (N) effect is achieved in the Prehospital setting	
Numerator Inclusion Criteria EMSA Data Elements	
□ patient's who are treated in □ EMSA#	
prehospital setting	
Desired effect is any	
change in patient status  where there is full or partial	
relief of symptoms	
desired effect is reported	
by EMS personnel through	
observation, assessment	
or by verbal questioning of	
patient.	
Numerator Data Source   EMS Medical Records	
Description of Indicator □ numerator value (N) divided by denominator value (D) multipli	ed
Formula by 100 equals percentage (%)	
Indicator Formula  N / D = %	
Numeric Expression	
LINKAGE LLINKAGE (INTIONS LEMSA Data Flements	
Linkage Linkage Options EMSA Data Elements  □ name □ FMSA #	
□ name □ EMSA #	
□ name □ EMSA #	
□ name □ EMSA # □ EMSA #	
□ name □ dob □ age □ gender □ admit date □ EMSA # □ EMSA # □ EMSA #	
name dob EMSA # Gender dob EMSA # Gender Gender dadmit date procedures EMSA # Gender DEMSA #	
□ name □ dob □ age □ gender □ admit date □ procedures □ EMSA #	
□ name □ dob □ age □ gender □ admit date □ procedures □ by age □ EMSA #	
□ name □ dob □ age □ gender □ admit date □ procedures □ by age □ by gender □ by gender □ by gender □ EMSA #	
□ name □ dob □ EMSA # □ age □ EMSA # □ gender □ admit date □ procedures □ EMSA # □ by age □ EMSA # □ by gender □ by incident type □ EMSA #	
□ name □ dob □ EMSA # □ age □ EMSA # □ gender □ admit date □ procedures □ EMSA # □ procedures □ EMSA # □ procedures □ EMSA # □ by age □ EMSA # □ by gender □ by incident type □ by response times □ EMSA #	
name dob BMSA # BMSA BABA BABA BABA BABA BABA BABA BABA	
□ name □ dob □ EMSA # □ age □ EMSA # □ gender □ admit date □ procedures □ EMSA # □ procedures □ EMSA # □ by age □ by gender □ by gender □ by gender □ by incident type □ by response times □ by scene times □ EMSA # □ EMSA # □ by response times □ EMSA # □ by scene times □ EMSA #	
□ name □ dob □ age □ EMSA # □ gender □ admit date □ procedures □ EMSA # □ mame □ EMSA # □ by age □ EMSA # □ by gender □ by gender □ by incident type □ by incident type □ by response times □ by scene times □ by provider level □ EMSA # □ by provider level □ EMSA # □ EMSA # □ EMSA #	
name	
name	
□ name □ EMSA # □ dob □ EMSA # □ age □ EMSA # □ gender □ EMSA # □ procedures □ EMSA # □ procedures □ EMSA # □ procedures □ EMSA # □ by age □ EMSA # □ by gender □ EMSA # □ by gender □ EMSA # □ by incident type □ EMSA # □ by response times □ EMSA # □ by scene times □ EMSA # □ by provider level □ EMSA # □ Demonstrate □ Improvided □ EMSA #	
name	_

	Utstein Model; Pitt, Penn Kass LE. One Year Survival after Prehospital Cardiac Arrest: The Utstein Model applied to Rural-
	Suburban EMS System. Ann of Emerg Med; 12:17-20, 1994
Source	□ California EMSA Vision Project

CORE INDICATOR Index # CA3C	CHEST PAIN-SUSPECTED CARDIAC ORIGIN						
Measure	Nitroglycerine (NTG): Frequency of Administration						
CORE INDICATOR REF	CARDIAC - ADULT						
#CA1	TREATMENT PROTOCOL UTILIZATION						
Objective	□ to measure % of patients suffering from chest pain of suspected						
		cardiac origin that receive nitroglycerine in pre-hospital setting.					
Classification	□ Medical care - clinical □ Process						
Type of Measure  Domain of Performance	<ul><li>□ Process</li><li>□ Frequency, Compliance</li></ul>						
Indicator Reporting Value	Trequency, Compliance     %						
Display Format	☐ List Chart						
Display 1 stillar	□ Cube Chart						
	□ Bar Chart						
	□ Line Graph						
	□ Process Control Chart						
Frequency of Display	☐ Monthly x 12						
Measures of Central	mean - Yes						
Tendency	mode - No						
	u variance - No						
Trending Analysis	□ standard deviation - No □ NA						
Minimum Data Values	☐ 30 values per measure						
Sampling	Periodic - Rate						
Aggregation	☐ Yes						
Blinded							
Beta Testing	□ None to Date						
Population Denominator (D)							
	pain of suspected cardiac or						
D	Inclusion Criteria EMSA Data Elements						
Denominator	microsion ontena	LINGA Data Liements					
Denominator	□ patient has reached age 15	EMSA #					
Denominator	<ul><li>patient has reached age 15</li><li>patient treated by EMS</li></ul>	□ EMSA#					
Denominator	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for chest pain of</li> </ul>	□ EMSA #					
Denominator	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> </ul>	□ EMSA#					
Denominator	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>event was in prehospital</li> </ul>	□ EMSA # □ EMSA # □ EMSA #					
Denominator	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>event was in prehospital setting</li> </ul>	□ EMSA #					
Denominator	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>event was in prehospital</li> </ul>	□ EMSA # □ EMSA # □ EMSA # □ EMSA #					
Denominator  Denominator Data Source	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>event was in prehospital setting</li> </ul>	□ EMSA # □ EMSA # □ EMSA # □ EMSA #					
Denominator Data Source	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>event was in prehospital setting</li> <li>specified query time period</li> <li>EMS Medical Records</li> </ul>	□ EMSA #					
Denominator Data Source Population Subset	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>event was in prehospital setting</li> <li>specified query time period</li> <li>EMS Medical Records</li> <li>the number of patients who</li> </ul>	□ EMSA #					
Denominator Data Source Population Subset Numerator (N)	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>event was in prehospital setting</li> <li>specified query time period</li> <li>EMS Medical Records</li> <li>the number of patients who Prehospital setting</li> </ul>	□ EMSA #					
Denominator Data Source Population Subset	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>event was in prehospital setting</li> <li>specified query time period</li> <li>EMS Medical Records</li> <li>the number of patients who Prehospital setting</li> <li>Inclusion Criteria</li> </ul>	□ EMSA #					
Denominator Data Source Population Subset Numerator (N)	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>event was in prehospital setting</li> <li>specified query time period</li> <li>EMS Medical Records</li> <li>the number of patients who Prehospital setting</li> <li>Inclusion Criteria</li> <li>patients who are treated in</li> </ul>	□ EMSA #					
Denominator Data Source  Population Subset Numerator (N) Numerator	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>event was in prehospital setting</li> <li>specified query time period</li> <li>EMS Medical Records</li> <li>the number of patients who Prehospital setting</li> <li>Inclusion Criteria</li> <li>patients who are treated in prehospital setting</li> </ul>	□ EMSA #					
Denominator Data Source  Population Subset Numerator (N) Numerator Numerator	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>event was in prehospital setting</li> <li>specified query time period</li> <li>EMS Medical Records</li> <li>the number of patients who Prehospital setting</li> <li>Inclusion Criteria</li> <li>patients who are treated in prehospital setting</li> <li>EMS Medical Records</li> </ul>	□ EMSA #					
Denominator Data Source  Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>event was in prehospital setting</li> <li>specified query time period</li> <li>EMS Medical Records</li> <li>the number of patients who Prehospital setting</li> <li>Inclusion Criteria</li> <li>patients who are treated in prehospital setting</li> <li>EMS Medical Records</li> <li>numerator value (N) divided</li> </ul>	□ EMSA #					
Denominator Data Source  Population Subset Numerator (N) Numerator Numerator	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>event was in prehospital setting</li> <li>specified query time period</li> <li>EMS Medical Records</li> <li>the number of patients who Prehospital setting</li> <li>Inclusion Criteria</li> <li>patients who are treated in prehospital setting</li> <li>EMS Medical Records</li> </ul>	□ EMSA #					
Denominator Data Source  Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression	□ patient has reached age 15 □ patient treated by EMS personnel for chest pain of suspected cardiac origin. □ event was in prehospital setting □ specified query time period □ EMS Medical Records □ the number of patients who Prehospital setting Inclusion Criteria □ patients who are treated in prehospital setting □ EMS Medical Records □ numerator value (N) divided by 100 equals percentage (4) □ N / D = %	□ EMSA # □ Description of the					
Denominator Data Source  Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>event was in prehospital setting</li> <li>specified query time period</li> <li>EMS Medical Records</li> <li>the number of patients who Prehospital setting</li> <li>Inclusion Criteria</li> <li>patients who are treated in prehospital setting</li> <li>EMS Medical Records</li> <li>numerator value (N) divided by 100 equals percentage (</li> </ul>	□ EMSA # □ EMSA Data Elements □ EMSA# □ EMSA Data Elements □ EMSA Data Elements					
Denominator Data Source  Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression	□ patient has reached age 15 □ patient treated by EMS personnel for chest pain of suspected cardiac origin. □ event was in prehospital setting □ specified query time period □ EMS Medical Records □ the number of patients who Prehospital setting Inclusion Criteria □ patients who are treated in prehospital setting □ EMS Medical Records □ numerator value (N) divided by 100 equals percentage (** □ N / D = **  Linkage Options □ name	□ EMSA # □ EMSA Data Elements □ EMSA# □ EMSA Data Elements □ EMSA Data Elements □ EMSA Data Elements □ EMSA Data Elements					
Denominator Data Source  Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression	<ul> <li>□ patient has reached age 15</li> <li>□ patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>□ event was in prehospital setting</li> <li>□ specified query time period</li> <li>□ EMS Medical Records</li> <li>□ the number of patients who Prehospital setting</li> <li>Inclusion Criteria</li> <li>□ patients who are treated in prehospital setting</li> <li>□ EMS Medical Records</li> <li>□ numerator value (N) divided by 100 equals percentage (°</li> <li>□ N / D = %</li> <li>Linkage Options</li> <li>□ name</li> <li>□ dob</li> </ul>	□ EMSA # □ EMSA Data Elements □ EMSA# □ EMSA Data Elements □ EMSA Data Elements □ EMSA Data Elements □ EMSA Data Elements					
Denominator Data Source  Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression	<ul> <li>□ patient has reached age 15</li> <li>□ patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>□ event was in prehospital setting</li> <li>□ specified query time period</li> <li>□ EMS Medical Records</li> <li>□ the number of patients who Prehospital setting</li> <li>Inclusion Criteria</li> <li>□ patients who are treated in prehospital setting</li> <li>□ EMS Medical Records</li> <li>□ numerator value (N) divided by 100 equals percentage (°</li> <li>□ N / D = %</li> <li>Linkage Options</li> <li>□ name</li> <li>□ dob</li> <li>□ age</li> </ul>	□ EMSA # □ EMSA Belements □ EMSA Data Elements □ EMSA Data Elements □ EMSA Data Elements □ EMSA #					
Denominator Data Source  Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression	<ul> <li>□ patient has reached age 15</li> <li>□ patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>□ event was in prehospital setting</li> <li>□ specified query time period</li> <li>□ EMS Medical Records</li> <li>□ the number of patients who Prehospital setting</li> <li>Inclusion Criteria</li> <li>□ patients who are treated in prehospital setting</li> <li>□ EMS Medical Records</li> <li>□ numerator value (N) divided by 100 equals percentage (°</li> <li>□ N / D = %</li> <li>Linkage Options</li> <li>□ name</li> <li>□ dob</li> <li>□ age</li> <li>□ gender</li> </ul>	□ EMSA # □ EMSA Data Elements □ EMSA# □ EMSA Data Elements □ EMSA #					
Denominator Data Source  Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression	<ul> <li>□ patient has reached age 15</li> <li>□ patient treated by EMS personnel for chest pain of suspected cardiac origin.</li> <li>□ event was in prehospital setting</li> <li>□ specified query time period</li> <li>□ EMS Medical Records</li> <li>□ the number of patients who Prehospital setting</li> <li>Inclusion Criteria</li> <li>□ patients who are treated in prehospital setting</li> <li>□ EMS Medical Records</li> <li>□ numerator value (N) divided by 100 equals percentage (°</li> <li>□ N / D = %</li> <li>Linkage Options</li> <li>□ name</li> <li>□ dob</li> <li>□ age</li> </ul>	□ EMSA # □ EMSA Data Elements □ EMSA Data Elements □ EMSA Data Elements □ EMSA #					

Stratification	Options	EMSA Data Elements		
	by age		EMSA #	
	by gender		EMSA #	
	by incident type		EMSA #	
	by response times		EMSA #	
	by scene times		EMSA #	
	by provider level		EMSA #	
Indicator Exclusion Criteria	non-cardiac etiologies,			
	cardiac etiologies where card	liac	chest pain was not chief	
	compliant			
	event not treated by EMS pe			
References	Abrams J: Nitroglycerine and			
	practice. Am J Med 1983;74			
	American Heart Assn. Textbo			
	Support, 3 <sup>rd</sup> Ed. Dallas: AHA			
	•		te Myocardial Infarction. Prog	
	Cardiovascular Disease 1979			
		ches	to Myocardial Infarction. Am	
	Heart J. 1981;22:107			
	Utstein Model; Pitt, Penn Kas			
	•		Jtstein Model applied to Rural-	
	Suburban EMS System. Anı		Emerg Med; 12:17-20, 1994	
Source	California EMSA Vision Proje	ect		

CORE INDICATOR Index # CA3D	CHEST PAIN-SUSPECTED CARDIAC ORIGIN						
Measure	Nit	Nitroglycerine: Desired Effect Achieved					
CORE INDICATOR REF		CARDIAC - ADULT					
#CA1	TR	TREATMENT PROTOCOL UTILIZATION					
Objective		3					
		cardiac origin that achieve a desired therapeutic effect from the administration of nitroglycerine in pre-hospital setting.					
Classification		Medical care - clinical	IC II	i pre-nospital setting.			
Type of Measure		Outcome					
Domain of Performance		Effectiveness					
Indicator Reporting Value		%					
Display Format		List Chart					
		Cube Chart					
		Bar Chart					
F		Line Graph					
Frequency of Display	<b>–</b>	Monthly x 12					
Measures of Central		mean - Yes mode - No					
Tendency		variance - No					
		standard deviation - Yes					
Trending Analysis		NA					
Minimum Data Values		30 values per measure					
Sampling		Periodic - Rate					
Aggregation		Yes					
Blinded		Yes					
Beta Testing		None to Date					
Population Denominator (D)		the number of adult patients	trea	ted by EMS personnel for chest			
		pain of suspected cardiac ori	igin 1	that receive nitroglycerine as			
B	•	part of their treatment.		AOA Data Elamanta			
Denominator	inc	lusion Criteria	EN	MSA Data Elements			
		patient has reached age 15		EMSA #			
		patient treated by EMS	_	5140.4 <i>(</i> (			
		personnel for chest pain of		EMSA #			
		suspected cardiac origin. patients who receive		EMSA #			
		nitroglycerine by any		EMSA #			
		modality or device.	-	LIVIO/ ( II			
		event was in prehospital		EMSA #			
		setting					
		specified query time period					
Denominator Data Source		IS Medical Records					
Population Subset		the number of patients who r					
Numerator (N) Numerator	Inc	desired effect is achieved in lusion Criteria		Prenospital setting  ISA Data Elements			
Numerator		patient's who are treated in		EMSA#			
	_	prehospital setting	_	LIVIOA#			
		Desired effect is any					
		change in patient status					
		where there is full or partial					
		relief of symptoms					
		desired effect is reported					
		by EMS personnel through					
		observation, assessment					
	1	or by verbal questioning of					
Numerator Data Source		patient.  EMS Medical Records					

Description of Indicator	numerator value (N) divided by denominator value (D) multiplied					
Formula	by 100 equals per	by 100 equals percentage (%)				
Indicator Formula	□ N / D = %	N / D = %				
Numeric Expression						
Linkage	Linkage Options	kage Options EMSA Data Elements				
	□ name	□ EMSA#				
	□ dob	□ EMSA #				
	□ age	□ EMSA#				
	gender	□ EMSA#				
	admit date	□ EMSA#				
	procedures	□ EMSA #				
Stratification	Options	EMSA Data Elements				
	■ by age	□ EMSA#				
	by gender	□ EMSA #				
	by incident type	□ EMSA #				
	by response times					
	by scene times	□ EMSA#				
	by provider level	□ EMSA #				
		□ EMSA#				
Indicator Exclusion Criteria	non-cardiac etiolo	9 ,				
		where cardiac chest pain was not chief				
	compliant	latava d				
	<ul> <li>oxygen not admin</li> <li>desired effect from</li> </ul>					
		n nitroglycerine administration not reported.				
References		cerine and long-acting nitrates in clinical				
iverel elices	0,	d 1983;74 (no6B):85				
		ssn. Textbook on Advanced Cardiac Life				
	Support, 3 <sup>rd</sup> Ed. D					
		agement of Acute Myocardial Infarction. Prog				
	Cardiovascular Di					
		ern Approaches to Myocardial Infarction. Am				
	Heart J. 1981;22:					
		, Penn Kass LE. One Year Survival after				
		ac Arrest: The Utstein Model applied to Rural-				
	•	ystem. Ann of Emerg Med; 12:17-20, 1994				
Source	□ California EMSA \					

CORE INDICATOR Index # CA3E	CHEST PAIN-SUSPECTED CARDIAC ORIGIN					
Measure	Morphine Sulfate (MS): Frequency of Administration					
CORE INDICATOR REF #CA1	CARDIAC - ADULT TREATMENT PROTOCOL UTILIZATION					
Objective						
	cardiac origin that receive morphine sulfate in pre-hospital					
Classification		etting. Medical care - clinical				
Type of Measure		Process				
Domain of Performance		requency, Compliance				
Indicator Reporting Value	<u> </u>					
Display Format		ist Chart				
		Cube Chart				
		Bar Chart				
		ine Graph				
Francisco of Diaglas		Process Control Chart				
Frequency of Display Measures of Central		Monthly x 12 nean - Yes				
Measures of Central Tendency		nean - Yes node - No				
rendency		ariance - No				
		tandard deviation - No				
Trending Analysis		IA				
Minimum Data Values		0 values per measure				
Sampling		Periodic - Rate				
Aggregation	Y	'es				
Blinded		'es				
Beta Testing		lone to Date				
Population Denominator (D)				ed by EMS personnel for chest		
		ain of suspected cardiac ori				
Denominator	Inclu	sion Criteria	ΕM	SA Data Elements		
		atient has reached age 15		EMSA #		
		atient treated by EMS		EN40 A #		
		ersonnel for chest pain of	0 (	EMSA #		
		uspected cardiac origin. vent was in prehospital		EMSA #		
		etting		EMSA #		
		pecified guery time period				
		, , , ,		EMSA #		
Denominator Data Source		MS Medical Records				
Damida (Co. O. L. )	_ ;			an manufacture and the second		
Population Subset Numerator (N)		ne number of patients who re Prehospital setting	ecei	ve morphine suitate in the		
Numerator (N)		sion Criteria	FM	SA Data Elements		
Numerator		atients who are treated in		EMSA#		
		rehospital setting	_			
Numerator Data Source		MS Medical Records				
Description of Indicator	□ n	umerator value (N) divided I	oy de	enominator value (D) multiplied		
Formula	b	y 100 equals percentage (%		-		
Indicator Formula		I / D = %	_			
Numeric Expression						
Linkage		age Options		SA Data Elements		
		ame		EMSA #		
		ob ge		EMSA # EMSA #		
		ge ender	ם כ	EMSA #		
	<b>-</b> 9	OTIGOT		LIVIOI ( II		

	admit date	□ EMSA #
Ctratification	□ procedures	□ EMSA #
Stratification	Options	EMSA Data Elements  □ EMSA #
	□ by age □ by gender	□ EMSA # □ EMSA #
	<ul><li>by gender</li><li>by incident type</li></ul>	□ EMSA #
	□ by incident type □ by response times	□ EMSA #
	□ by scene times	□ EMSA #
	by provider level	□ EMSA #
	- 3, p	
		□ EMSA#
Indicator Exclusion Criteria	non-cardiac etiologies,	
		ardiac chest pain was not chief
	compliant	
Deference	event not treated by EMS	
References	Abrams J: Nitroglycerine practice. Am J Med 1983;	and long-acting nitrates in clinical
		ktbook on Advanced Cardiac Life
	Support, 3 <sup>rd</sup> Ed. Dallas: A	
		of Acute Myocardial Infarction. Prog
	Cardiovascular Disease	
		roaches to Myocardial Infarction. Am
	Heart J. 1981;22:107	,
	Utstein Model; Pitt, Penn	Kass LE. One Year Survival after
	Prehospital Cardiac Arres	t: The Utstein Model applied to Rural-
		Ann of Emerg Med; 12:17-20, 1994
Source	California EMSA Vision P	
	CHEST PAIN-SUSPECTED	CARDIAC ORIGIN
CORE INDICATOR		
Index # CA3E		
Measure	Morphine Sulfate: Desired	Iffect Achieved
mododio		
CORE INDICATOR REF	CARDIAC - ADULT	
CORE INDICATOR REF #CA1	TREATMENT PROTOCOL U	
CORE INDICATOR REF	TREATMENT PROTOCOL U  to measure % of patients	suffering from chest pain of suspected
CORE INDICATOR REF #CA1	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective Classification	TREATMENT PROTOCOL U to measure % of patients cardiac origin that achieve administration of morphin Medical care - clinical	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure	TREATMENT PROTOCOL U to measure % of patients cardiac origin that achieve administration of morphin Medical care - clinical Outcome	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness  %	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness  %  List Chart	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness  Medical care - clinical	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12 mean - Yes	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Hine Graph Monthly x 12 mean - Yes mode - No	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12 mean - Yes mode - No variance - No	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12 mean - Yes mode - No variance - No standard deviation - Yes	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12 mean - Yes mode - No variance - No standard deviation - Yes  NA	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis Minimum Data Values	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12 mean - Yes mode - No variance - No standard deviation - Yes NA  30 values per measure	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis Minimum Data Values Sampling	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12 mean - Yes mode - No variance - No standard deviation - Yes NA  30 values per measure Periodic - Rate	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis Minimum Data Values Sampling Aggregation	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12 mean - Yes mode - No variance - No standard deviation - Yes NA 30 values per measure Periodic - Rate Yes	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis Minimum Data Values Sampling Aggregation Blinded	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12 mean - Yes mode - No variance - No standard deviation - Yes NA 30 values per measure Periodic - Rate Yes Yes	suffering from chest pain of suspected a desired therapeutic effect from the
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis Minimum Data Values Sampling Aggregation Blinded Beta Testing	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12 mean - Yes mode - No variance - No standard deviation - Yes NA 30 values per measure Periodic - Rate Yes None to Date	suffering from chest pain of suspected a desired therapeutic effect from the in pre-hospital setting.
CORE INDICATOR REF #CA1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis Minimum Data Values Sampling Aggregation Blinded	TREATMENT PROTOCOL U  to measure % of patients cardiac origin that achieve administration of morphin  Medical care - clinical  Outcome  Effectiveness  %  List Chart Cube Chart Bar Chart Line Graph Monthly x 12  mean - Yes mode - No variance - No standard deviation - Yes NA  30 values per measure Periodic - Rate Yes None to Date the number of adult patie	suffering from chest pain of suspected a desired therapeutic effect from the

their treatment.				
Denominator	Inc	lusion Criteria	EN	ISA Data Elements
		patient has reached age 15		EMSA #
		patient treated by EMS		EMSA #
	-	personnel for chest pain of		EMSA #
		suspected cardiac origin.		EMSA #
		patients who receive		
		morphine by any modality		EMSA #
		or device.		
		event was in prehospital		EMSA #
	L	setting		
Denominator Data Source	EM	specified query time period IS Medical Records		
Population Subset			ecei	ve morphine where a desired
Numerator (N)	-	effect is achieved in the Preh		•
Numerator	Inc	lusion Criteria		ISA Data Elements
		patient's who are treated in		EMSA#
		prehospital setting		
		Desired effect is any		
		change in patient status		
		where there is full or partial		
	l ,	relief of symptoms desired effect is reported		
		by EMS personnel through		
		observation, assessment		
		or by verbal questioning of		
		patient.		
Numerator Data Source		EMS Medical Records		
Description of Indicator				enominator value (D) multiplied
Formula	by 100 equals percentage (%)			
	_		٠,	
Indicator Formula		N / D = %	<u> </u>	
Indicator Formula Numeric Expression		N / D = %		ISA Data Elementa
Indicator Formula	Lir	N / D = %	EN	ISA Data Elements
Indicator Formula Numeric Expression	Lir	N / D = %  nkage Options  name	EN	EMSA #
Indicator Formula Numeric Expression	Lir	N / D = %  nkage Options  name dob	EN	
Indicator Formula Numeric Expression	Lin	N / D = %  nkage Options  name	EN	EMSA # EMSA #
Indicator Formula Numeric Expression	Lir	N / D = %  nkage Options  name dob age	<b>EN</b>	EMSA # EMSA # EMSA # EMSA # EMSA #
Indicator Formula Numeric Expression Linkage	Lir	N / D = %  Ikage Options  name dob age gender admit date procedures	<b>EN</b>	EMSA #
Indicator Formula Numeric Expression	Lir	N / D = %  nkage Options  name dob age gender admit date procedures  Options	<b>EN</b>	EMSA #
Indicator Formula Numeric Expression Linkage	Lir	N / D = %  nkage Options  name dob age gender admit date procedures  Options  by age	<b>EN</b>	EMSA #
Indicator Formula Numeric Expression Linkage	Lir	N / D = %  nkage Options  name dob age gender admit date procedures  Options  by age by gender	<b>EN</b>	EMSA # EMSA Data Elements EMSA # EMSA #
Indicator Formula Numeric Expression Linkage	Lir	N / D = %  nkage Options  name dob age gender admit date procedures  Options  by age by gender by incident type	EN	EMSA # EMSA Bata Elements EMSA # EMSA # EMSA #
Indicator Formula Numeric Expression Linkage	Lir	N / D = %  Ikage Options  name dob age gender admit date procedures  Options  by age by gender by incident type by response times	<b>EN</b>	EMSA # EMSA Data Elements  EMSA # EMSA # EMSA # EMSA # EMSA #
Indicator Formula Numeric Expression Linkage	Lir	N / D = %  nkage Options  name dob age gender admit date procedures  Options  by age by gender by incident type	EN	EMSA # EMSA Bata Elements EMSA # EMSA # EMSA #
Indicator Formula Numeric Expression Linkage	Lir	N / D = %  Ikage Options  name dob age gender admit date procedures  Options  by age by gender by incident type by response times	EN	EMSA # EMSA BEMSA # EMSA #
Indicator Formula Numeric Expression Linkage  Stratification	Lir	N / D = %  Ikage Options  name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times	EN	EMSA # EMSA Bata Elements  EMSA #
Indicator Formula Numeric Expression Linkage	Lir	N / D = %  Ikage Options  name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times  non-cardiac etiologies,	EN	EMSA # EMSA # EMSA # EMSA # EMSA # EMSA # EMSA BEMSA # EMSA #
Indicator Formula Numeric Expression Linkage  Stratification	Lir	N / D = %  Ikage Options  name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times  non-cardiac etiologies, cardiac etiologies where card	EN	EMSA # EMSA # EMSA # EMSA # EMSA # EMSA # EMSA BEMSA # EMSA #
Indicator Formula Numeric Expression Linkage  Stratification	Lir	N / D = %  Ikage Options  name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times  non-cardiac etiologies, cardiac etiologies where card compliant	EN	EMSA # EMSA # EMSA # EMSA # EMSA # EMSA # EMSA BEMSA # EMSA #
Indicator Formula Numeric Expression Linkage  Stratification	Lir	N / D = %  Ikage Options  name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times  non-cardiac etiologies, cardiac etiologies where card compliant oxygen not administered	EN O	EMSA # EMSA # EMSA # EMSA # EMSA # EMSA # EMSA BEMSA # EMSA #
Indicator Formula Numeric Expression Linkage  Stratification	Lir	N / D = %  Ikage Options  name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times  non-cardiac etiologies, cardiac etiologies where card compliant oxygen not administered desired effect from morphine	EN O O O O O O O O O O O O O O O O O O O	EMSA # EMSA # EMSA # EMSA # EMSA # EMSA # EMSA BEMSA # EMSA #
Indicator Formula Numeric Expression Linkage  Stratification	Lir	N / D = %  Ikage Options  name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times  non-cardiac etiologies, cardiac etiologies where card compliant oxygen not administered	EN D D D D D D D D D D D D D D D D D D D	EMSA # EMSA # EMSA # EMSA # EMSA # EMSA # EMSA BEMSA # EMSA #
Indicator Formula Numeric Expression Linkage  Stratification  Indicator Exclusion Criteria	Lir	N / D = %  Ikage Options  name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times  non-cardiac etiologies, cardiac etiologies where card compliant oxygen not administered desired effect from morphine event not treated by EMS pe Abrams J: Nitroglycerine and practice. Am J Med 1983;74	EN	EMSA # EMSA # EMSA # EMSA # EMSA # EMSA # EMSA BEMSA # EMSA #
Indicator Formula Numeric Expression Linkage  Stratification  Indicator Exclusion Criteria	Lir	N / D = %  Ikage Options  name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times  non-cardiac etiologies, cardiac etiologies where card compliant oxygen not administered desired effect from morphine event not treated by EMS pe Abrams J: Nitroglycerine and practice. Am J Med 1983;74 American Heart Assn. Textbo	EN	EMSA # EMSA # EMSA # EMSA # EMSA # EMSA # EMSA Data Elements  EMSA # Chest pain was not chief
Indicator Formula Numeric Expression Linkage  Stratification  Indicator Exclusion Criteria	Lir	name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times  non-cardiac etiologies, cardiac etiologies where card compliant oxygen not administered desired effect from morphine event not treated by EMS pe Abrams J: Nitroglycerine and practice. Am J Med 1983;74 American Heart Assn. Textor Support, 3 <sup>rd</sup> Ed. Dallas: AHA	EN Grant Control of the control of t	EMSA # EMSA # EMSA # EMSA # EMSA # EMSA # EMSA Data Elements  EMSA # Chest pain was not chief

	Cardiovascular Disease 1979;22:1 Rackley CE: Modern Approaches to Myocardial Infarction. Am Heart J. 1981;22:107 Utstein Model; Pitt, Penn Kass LE. One Year Survival after Prehospital Cardiac Arrest: The Utstein Model applied to Rural-Suburban EMS System. Ann of Emerg Med; 12:17-20, 1994
Source	California EMSA Vision Project

CORE INDICATOR Index # CA3G	CHEST PAIN-SUSPECTED CARDIAC ORIGIN					
Measure	Ası	Aspirin (ASA): Frequency of Administration				
CORE INDICATOR REF #CA1		CARDIAC - ADULT TREATMENT PROTOCOL UTILIZATION				
Objective		□ to measure % of patients suffering from chest pain of suspected				
		cardiac origin that receive as	pirin	in pre-hospital setting.		
Classification		Medical care - clinical				
Type of Measure  Domain of Performance		Process				
Indicator Reporting Value		□ Frequency, Compliance □ %				
Display Format		List Chart				
Diopidy i orinat		Cube Chart				
		Bar Chart				
		Line Graph				
		Process Control Chart				
Frequency of Display		Monthly x 12				
Measures of Central		mean - Yes				
Tendency		mode - No				
		variance - No standard deviation - No				
Trending Analysis		NA				
Minimum Data Values		30 values per measure				
Sampling		Periodic - Rate				
Aggregation		Yes				
Blinded		Yes				
Beta Testing		None to Date				
Population Denominator (D)			treat	ed by EMS personnel for chest		
	pain of suspected cardiac origin.					
Denominator	Inc	lusion Criteria	EM	SA Data Elements		
		patient has reached age 15		EMSA #		
		patient treated by EMS				
		personnel for chest pain of		EMSA #		
		suspected cardiac origin.		EMSA #		
		event was in prehospital setting		EMSA #		
		specified query time period	_	LINOA #		
		opcomen query mile person		EMSA #		
Denominator Data Source		EMS Medical Records				
Population Subset		the number of patients who r	ecei	ve aspirin in the Prehospital		
Numerator (N)		setting				
Numerator	Inc	lusion Criteria	EM	SA Data Elements		
		patients who are treated in prehospital setting		EMSA#		
Numerator Data Source		EMS Medical Records				
Description of Indicator				enominator value (D) multiplied		
Formula		by 100 equals percentage (%	6)			
Indicator Formula		N / D = %				
Numeric Expression	1 :	kaga Ontiona	EN4	SA Data Flamenta		
Linkage		hage Options name		SA Data Elements EMSA #		
		dob		EMSA #		
		age		EMSA #		
		gender		EMSA #		
		admit date		EMSA #		
		·				

	procedures		EMSA #
Stratification	Options		EMSA Data Elements
	by age		EMSA #
	by gender		EMSA #
	by incident type		EMSA #
	by response times		EMSA #
	by scene times		EMSA #
	by provider level		EMSA #
			EMSA #
Indicator Exclusion Criteria	non-cardiac etiologies,		
	cardiac etiologies where card	liac (	chest pain was not chief
	compliant		
	event not treated by EMS pe		
References	Abrams J: Nitroglycerine and		
	practice. Am J Med 1983;74		
	American Heart Assn. Textbo		
	Support, 3 <sup>rd</sup> Ed. Dallas: AHA		
			te Myocardial Infarction. Prog
	Cardiovascular Disease 1979		
	•	ches	to Myocardial Infarction. Am
	Heart J. 1981;22:107		
	Utstein Model; Pitt, Penn Kas		
	•		Utstein Model applied to Rural-
	Suburban EMS System. Ann		Emerg Med; 12:17-20, 1994
Source	California EMSA Vision Proje	ect	

CORE INDICATOR Index # CA3H	CHEST PAIN-SUSPECTED CARDIAC ORIGIN					
Measure	La	<u>Lapse Time - On Scene</u>				
Objective		to measure average time on-scene for EMS response units treating a patient with chest pain of suspected cardiac origin.				
Classification		medical care - clinical				
Type of Measure		Process				
Domain of Performance		Effectiveness				
Indicator Reporting Value		Ave time on scene in Minute	s + S	Seconds		
Display Format		Cube Chart				
		Bar Chart				
Francisco of Discolar		Line Graph				
Frequency of Display		Monthly x 12				
Measures of Central Tendency		mean - Yes mode - No				
rendency		variance - No				
		standard deviation - No				
Trending Analysis		Yes				
Minimum Data Values	<u> </u>	30 values per measure				
Sampling		Periodic - Rate				
Aggregation		Yes				
Blinded		Yes				
Beta Testing		None to Date				
Population Denominator (D)		Number of EMS calls where	patie	ent was treated for chest pain of		
		suspected cardiac origin				
Denominator	Inc	clusion Criteria	EN	ISA Data Elements		
		patient has reached age 15		EMSA #		
		patient has treated by EMS		EMSA #		
		personnel for chest pain of				
	_	suspected cardiac origin		5140 A #		
		event was in prehospital		EMSA #		
		setting specified query time period		EMSA#		
Denominator Data Source		PSAP Record		LWOA #		
Denominator Bata Goarde	0	Dispatch Agency Records				
		EMS Medical Records				
Population Subset		lapse time is the time when a	a EM	S Response Unit arrives on		
Numerator (N)		scene (wheel stop) to the time	ie wl	nen unit begins transport (wheel		
				lapse times are added together		
		for all patients identified in de				
Numerator		clusion Criteria		ISA Data Elements		
		patient has reached age 15				
		patient has treated by EMS personnel for chest pain of				
		suspected cardiac origin				
		event was in prehospital				
	_	setting				
		Lapsed times where time				
		arrival on scene and begin				
		transport is recorded.				
		Specified query time				
		period is the same as				
		Denominator (D)				
Numerator Data Source		PSAP Record				
	Dispatch Agency Records     FMS Medical Records					
Description of Indicator		EMS Medical Records	hv 4	onominator value (D) – everage		
Description of Indicator		numerator value (N) divided	uy d	enominator value (D) = average		

Formula		time on scene.			
Indicator Formula		N / D = Ave Time On Scene			
Numeric Expression					
Linkage	Lir	nkage Options	EN	ISA Data Elements	
		Age		EMSA #	
		Vitals		EMSA #	
				EMSA#	
Stratification		Options		EMSA Data Elements	
		by age		EMSA #	
		by gender		EMSA #	
		by incident type		EMSA #	
		by response times		EMSA #	
		by scene location		EMSA #	
		by response unit		EMSA #	
		by provider level		EMSA #	
Indicator Exclusion Criteria		Non-cardiac etiologies,			
				not treated by EMS personnel	
		Cardiac etiologies where pat			
References		Abrams J: Nitroglycerine and long-acting nitrates in clinical			
		practice. Am J Med 1983;74	•	,	
		American Heart Assn. Textbo			
		Support, 3 <sup>rd</sup> Ed. Dallas: AHA			
				te Myocardial Infarction. Prog	
		Cardiovascular Disease 1979;22:1 Rackley CE: Modern Approaches to Myocardial Infarction. Am			
			cnes	s to Myocardial Infarction. Am	
		Heart J. 1981;22:107 Utstein Model; Pitt, Penn Kas	-	- One Veer Survival ofter	
		· · ·			
		Suburban EMS System. Ani		Utstein Model applied to Rural-	
Source		California EMSA Vision Proje		Linery Weu, 12.17-20, 1994	
Source	J	Camorna Livion Vision Proje	<del>-</del> 01		

CORE INDICATOR Index # CA3I	CHEST PAIN-SUSPECTED CARDIAC ORIGIN					
Measure	Decrease/Relief of Symptoms					
Objective	symptoms when treated by E suspected cardiac origin	symptoms when treated by EMS personnel for chest pain of				
Classification	□ medical care - clinical					
Type of Measure	□ outcome					
Domain of Performance	□ Effectiveness					
Indicator Reporting Value						
Display Format						
	□ Bar Chart					
Fraguency of Diopley	☐ Line Graph					
Frequency of Display Measures of Central	☐ Monthly x 12 ☐ mean - Yes					
Tendency	□ mode - No □ variance - No					
	standard deviation - No					
Trending Analysis						
Minimum Data Values						
Sampling	'					
Aggregation						
Blinded						
Beta Testing						
Population Denominator (D)		patient was treated for chest pain of				
r opaiation bonominator (b)	suspected cardiac origin	sation was troated for shoot pain of				
Denominator	·	EMSA Data Elements				
2 011 011 111 111						
	<ul> <li>patient has reached age 15</li> <li>patient has treated by EMS personnel for chest pain of suspected cardiac origin</li> <li>event was in prehospital setting</li> </ul>	<ul> <li>EMSA #36</li> <li>EMSA #54VTAC, 54VFIB</li> <li>EMSA #54C-A</li> <li>EMSA #54</li> </ul>				
	specified query time period					
Denominator Data Source	□ EMS Medical Records					
Population Subset Numerator (N)	symptoms after treatment by	the number of patients with reported decrease or full relief of symptoms after treatment by EMS personnel in Prehospital				
N	setting.	FMCA Data Flamenta				
Numerator	Inclusion Criteria	EMSA Data Elements				
	<ul> <li>patient has reached age 15</li> <li>patient has treated by EMS personnel for chest pain of suspected cardiac origin</li> <li>reported that patient had decrease or full relief of</li> </ul>	□ EMSA#				
	symptoms event was in prehospital setting specified query time period same as denominator					
Numerator Data Source	□ EMS Medical Records					
Description of Indicator Formula		□ numerator value (N) divided by denominator value (D) multiplied				
Indicator Formula Numeric Expression	□ N/D=%					

Linkage	Lir	nkage Options	EN	ISA Data Elements		
		name		EMSA #29		
		dob		EMSA #35		
		age		EMSA #36		
		gender		EMSA #38		
		time		EMSA#?		
				EMSA #73		
Stratification		Options		EMSA Data Elements		
		by age		EMSA #36		
		by gender		EMSA #38		
		by incident type		EMSA #8		
		by response times		EMSA #17-20		
		by scene times		EMSA #8		
		by medication admin		EMSA #73 (99.62)		
		by provider level				
Indicator Exclusion Criteria		chest pain of non-cardiac etiologies				
		chest pain not treated in prehospital setting				
		Chest pain where patient refu				
References		Abrams J: Nitroglycerine and long-acting nitrates in clinical				
		practice. Am J Med 1983;74				
		American Heart Assn. Textbo				
		Support, 3 <sup>rd</sup> Ed. Dallas: AHA				
				te Myocardial Infarction. Prog		
		Cardiovascular Disease 1979;22:1				
			ches	s to Myocardial Infarction. Am		
		Heart J. 1981;22:107				
		Utstein Model; Pitt, Penn Kas				
		Prehospital Cardiac Arrest: The Utstein Model applied to Rural-				
		Suburban EMS System. Ann		Emerg Med; 12:17-20, 1994		
Source		California EMSA Vision Proje	ect			

CORE INDICATOR	CHEST PAIN-SUSPECTED CARDIAC ORIGIN				
Index # CA3J					
Measure	Survival to Hospital Discharge				
Objective	□ to measure % of patients who survive to hospital discharge after				
	suffering an episode where they experience chest pain of				
	suspected cardiac origin and are treated by EMS personnel in Prehospital setting.				
Classification	□ medical care - clin				
Type of Measure	□ outcome				
Domain of Performance	<ul><li>Effectiveness</li></ul>				
Indicator Reporting Value	<u> </u>				
Display Format	□ Bar Chart				
Frequency of Display	☐ Line Graph ☐ Monthly x 12				
Measures of Central	□ mean - Yes				
Tendency	□ mode - No				
	variance - No				
	standard deviation	- No			
Trending Analysis	□ NA				
Minimum Data Values	<ul><li>30 values per mea</li><li>Periodic - Rate</li></ul>	asure			
Sampling Aggregation	□ Periodic - Rate □ Yes				
Blinded	□ Yes				
Beta Testing	□ None to Date				
Population Denominator (D)	the number of adult patients who suffer chest pain of suspected				
. ,	cardiac origin and treated by EMS personnel in Prehospital setting.				
Denominator	Inclusion Criteria	EMSA Data Elements			
	patient has reached				
	<ul><li>patient has suffered</li><li>pain of suspected</li></ul>				
	origin	□ EMSA #54C-A			
	patient was treated by				
	EMS personnel	□ EMSA #54			
	event was in preh				
	setting  specified query tin	□ EMSA #52			
Denominator Data Source	□ EMS Medical Rec				
	☐ Hospital Discharge				
	□ OSHPD Records				
Population Subset	the number of pati	ents who survive to hospital discharge			
Numerator (N) Numerator	Inclusion Criteria	EMSA Data Elements			
Numerator	patients who survi				
	hospital discharge	` ,			
Numerator Data Source	□ hospital discharge records				
Description of Indicator	OSHPD discharge				
Description of Indicator Formula	by 100 equals per	N) divided by denominator value (D) multiplied			
Indicator Formula	□ N / D = %	Contage (70)			
Numeric Expression	IN / D = /0				
Linkage	Linkage Options EMSA Data Elements				
	□ name	□ EMSA #29			
	□ dob	□ EMSA #35			
	<ul><li>□ age</li><li>□ gender</li></ul>	□ EMSA #36 □ EMSA #38			
	□ admit date	□ EMSA # ?			

	procedures		EMSA #73
Stratification	Options		EMSA Data Elements
	by age		EMSA #36
	by gender		EMSA #38
	by incident type		EMSA #8
	by response times		EMSA #17-20
	by scene times		EMSA #8
	by number of defibrillations		EMSA #73 (99.62)
	by provider level		
			EMSA #25
Indicator Exclusion Criteria	Chest pain of non-cardiac eti	_	•
		es v	where treatment not attempted
	by EMS personnel		
	patient has not survived to he		
References	Abrams J: Nitroglycerine and		
	practice. Am J Med 1983;74		
	American Heart Assn. Textbo		
	Support, 3 <sup>rd</sup> Ed. Dallas: AHA		
			te Myocardial Infarction. Prog
	Cardiovascular Disease 1979		
		ches	s to Myocardial Infarction. Am
	Heart J. 1981;22:107		
	Utstein Model; Pitt, Penn Kas		
	•		Utstein Model applied to Rural-
	Suburban EMS System. Ann		Emerg Med; 12:17-20, 1994
Source	California EMSA Vision Proje	ct	

CORE INDICATOR INDEX # ED1A	EN	IS EDUCATION & TRAINING				
Measure	Gr	aduates per year: EMT-1				
CORE INDICATOR REF	_	SYSTEM OPERATIONS				
#ED1		EDUCATION & TRAINING				
Objective		to measure the number of st California approved EMT-1 to				
Classification		system ops - education	anning programs each year.			
Type of Measure		structural				
Domain of Performance		Volume				
Indicator Reporting Value		number per year				
Display Format		List				
		Cube Chart				
Frequency of Display		Monthly x 12				
Measures of Central Tendency		mean - No mode - No				
rendency		variance - No				
		standard deviation - No				
Trending Analysis		NA				
Minimum Data Values		30 values per measure				
Sampling		Periodic - Rate				
Aggregation		Yes				
Blinded		Yes				
Beta Testing		None to Date				
Population Denominator (D)  Denominator	U Ind	NA clusion Criteria	EMSA Data Elements			
Denominator	IIIC	Susion Criteria	EMISA Data Elements			
		graduates of Cal approved	□ EMSA #			
		EMT-1 Training Programs				
Denominator Data Source	LE	MSA Records				
Population Subset		NA				
Numerator (N)		lusian Onitania	FMCA Data Flamanta			
Numerator	Inc	clusion Criteria NA	EMSA Data Elements			
Numerator Data Source		NA NA	<u> </u>			
Description of Indicator		number value per 12 month	period			
Formula		- Hamber value per 12 month period				
Indicator Formula		□ NA				
Numeric Expression						
Linkage		nkage Options	EMSA Data Elements			
		name	□ EMSA #29			
		dob age	<ul><li>□ EMSA #35</li><li>□ EMSA #36</li></ul>			
		gender	☐ EMSA #38			
Stratification		Options	EMSA Data Elements			
		by age	□ EMSA #36			
		by gender	□ EMSA #38			
Indicator Exclusion Criteria						
References	•		on of Educational Programs for			
			ces Professions (CAEPEMSP)			
	•		uality Indicator Reporting Criteria			
		Belford, Texas. 817 345-851				
	•		onal Agenda for the Future; A ton DC; Government Print Office			
			1993) National EMS Education &			
		Practice Blueprint. Columbia				
	•		study of Cognitive and Technical			
		Skills Deterioration Among T	rained paramedics. JACEP 1997;6:			

	436-438	
Source	☐ California EMSA Vision Proj	ect
	<b>EMS EDUCATION &amp; TRAINING</b>	
CORE INDICATOR		
INDEX # ED1B	OV CONTINUE NAME OF THE A	
Measure	% Certified per Year: EMT-1	
CORE INDICATOR REF	SYSTEM OPERATIONS	
#ED1	EDUCATION & TRAINING	and a standard and a superficient forms
Objective	to measure the number of st	
Classification	California approved EMT-1 t  system ops - education	raining programs each year.
Type of Measure	structural	
Domain of Performance	□ Volume	
Indicator Reporting Value	number per year	
Display Format	List	
	□ Cube Chart	
Frequency of Display	☐ Monthly x 12	
Measures of Central	□ mean - No	
Tendency	□ mode - No	
	□ variance - No	
	standard deviation - No	
Trending Analysis	□ NA	
Minimum Data Values	□ 30 values per measure	
Sampling	Periodic - Rate	
Aggregation	□ Yes	
Blinded Beta Testing	☐ Yes☐ None to Date	
Population Denominator (D)	□ None to Date □ NA	
Denominator	Inclusion Criteria	EMSA Data Elements
Denominator	inclusion officeria	LINISA Data Lienients
	□ graduates of Cal approved	□ EMSA#
	1 3	□ EMSA #
Denominator Data Source	☐ graduates of Cal approved EMT-1 Training Programs LEMSA Records	
Population Subset	EMT-1 Training Programs	
	EMT-1 Training Programs  LEMSA Records  NA	
Population Subset	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria	EMSA Data Elements
Population Subset Numerator (N) Numerator	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA	
Population Subset Numerator (N) Numerator Numerator Data Source	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria NA NA	EMSA Data Elements
Population Subset Numerator (N) Numerator Numerator Data Source Description of Indicator	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA	EMSA Data Elements
Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA  NA  number value per 12 month	EMSA Data Elements
Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria NA NA	EMSA Data Elements
Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA  NA  number value per 12 month  NA	EMSA Data Elements  period
Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA  NA  number value per 12 month  NA  Linkage Options	EMSA Data Elements  period  EMSA Data Elements
Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA  NA  number value per 12 month  NA	EMSA Data Elements  period
Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA  NA  number value per 12 month  NA  Linkage Options name	EMSA Data Elements  period  EMSA Data Elements  DEMSA Data Elements  DEMSA #29
Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression Linkage	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA  NA  NA  NA  NA  NA  NA  NA  NA  N	EMSA Data Elements  period  EMSA Data Elements  EMSA #29 EMSA #35 EMSA #36 EMSA #38
Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA  NA  NA  NA  NA  NA  NA  NA  NA  A	EMSA Data Elements  period  EMSA Data Elements  EMSA #29  EMSA #35  EMSA #36  EMSA #38  EMSA #38
Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression Linkage	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA  NA  NA  number value per 12 month  NA  Linkage Options  name dob age gender Options  by age	EMSA Data Elements  period  EMSA Data Elements  EMSA #29 EMSA #35 EMSA #36 EMSA #36 EMSA #38 EMSA #38
Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression Linkage  Stratification	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA  NA  NA  NA  NA  NA  NA  NA  NA  A	EMSA Data Elements  period  EMSA Data Elements  EMSA #29  EMSA #35  EMSA #36  EMSA #38  EMSA #38
Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression Linkage  Stratification	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA  NA  number value per 12 month  NA  Linkage Options  name dob age gender Options  by age by gender	EMSA Data Elements  period  EMSA Data Elements  EMSA #29 EMSA #35 EMSA #36 EMSA #36 EMSA #38  EMSA Data Elements  EMSA #38  EMSA #36 EMSA #38
Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression Linkage	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA  NA  NA  NA  NA  NA  NA  NA  Linkage Options  name dob age gender  Options  by age by gender  Committee on Accreditation	EMSA Data Elements  period  EMSA Data Elements  EMSA #29 EMSA #35 EMSA #36 EMSA #36 EMSA #38  EMSA Data Elements  EMSA #38  EMSA Data Elements  EMSA #38  EMSA Data Elements
Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression Linkage  Stratification	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA  NA  NA  NA  NA  Inumber value per 12 month  NA  Linkage Options  name dob age gender Options  by age by gender  Committee on Accreditation Emergency Medical Service	EMSA Data Elements  period  EMSA Data Elements  EMSA #29 EMSA #35 EMSA #36 EMSA #36 EMSA #38  EMSA Data Elements  EMSA #38  EMSA Data Elements  EMSA #36 EMSA #36 EMSA #36 EMSA #36 EMSA #38
Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression Linkage  Stratification	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA  NA  NA  number value per 12 month  NA  Linkage Options  name dob age gender  Options  by age by gender  Committee on Accreditating Emergency Medical Service Accreditation Guidelines; Q	EMSA Data Elements  period  EMSA Data Elements  EMSA #29 EMSA #35 EMSA #36 EMSA #36 EMSA #38  EMSA Data Elements  EMSA #36 EMSA #38  EMSA #36 EMSA #38  On of Educational Programs for ces Professions (CAEPEMSP) uality Indicator Reporting Criteria
Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression Linkage  Stratification	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA  NA  NA  NA  NA  NA  NA  Linkage Options  name  dob age gender  Options  by age by gender  Committee on Accreditatine Emergency Medical Service Accreditation Guidelines; Q Belford, Texas. 817 345-851	EMSA Data Elements  period  EMSA Data Elements  EMSA #29 EMSA #35 EMSA #36 EMSA #38  EMSA Data Elements  EMSA #38  EMSA #38  On of Educational Programs for res Professions (CAEPEMSP)  uality Indicator Reporting Criteria 9
Population Subset Numerator (N) Numerator  Numerator Data Source Description of Indicator Formula Indicator Formula Numeric Expression Linkage  Stratification	EMT-1 Training Programs  LEMSA Records  NA  Inclusion Criteria  NA  NA  NA  NA  NA  NA  Inumber value per 12 month  NA  Linkage Options  name  dob  age gender  Options  by age by gender  Committee on Accreditatine Emergency Medical Service Accreditation Guidelines; Questions Belford, Texas. 817 345-851  NHTSA (2000) EMS Educat	EMSA Data Elements  period  EMSA Data Elements  EMSA #29 EMSA #35 EMSA #36 EMSA #36 EMSA #38  EMSA #36 EMSA #38  EMSA #38  on of Educational Programs for ces Professions (CAEPEMSP) uality Indicator Reporting Criteria

Source Source	<ul> <li>National Registry of EMT's; (1993) National EMS Education &amp; Practice Blueprint. Columbia, Ohio</li> <li>Skelton MB, McSwain NE. A study of Cognitive and Technical Skills Deterioration Among Trained paramedics. JACEP 1997;6: 436-438</li> <li>California EMSA Vision Project</li> <li>EMS EDUCATION &amp; TRAINING</li> </ul>				
CORE INDICATOR INDEX # ED1C					
Measure	<u>Training Seats Available per ye</u> <u>EMT-Paramedic Training Prog</u>				
CORE INDICATOR REF	SYSTEM OPERATIONS				
#ED1 Objective	EDUCATION & TRAINING  to measure the number of tra	ining seats available each year for			
Objective	paramedic training at approv				
Classification	□ system ops - education	od zmr i daming programe.			
Type of Measure	□ structural				
Domain of Performance	□ Volume				
Indicator Reporting Value	<ul><li>number per year</li></ul>				
Display Format	□ List				
Francisco of Display	☐ Cube Chart				
Frequency of Display Measures of Central	☐ Monthly x 12 ☐ mean - No				
Tendency	□ mode - No				
rendency	□ variance - No				
	standard deviation - No				
Trending Analysis	□ NA				
Minimum Data Values	□ 30 values per measure				
Sampling	□ Periodic - Rate				
Aggregation	□ Yes	□ Yes			
Blinded	□ Yes				
Beta Testing	□ None to Date				
Population Denominator (D)	□ NA				
Denominator	Inclusion Criteria EMSA Data Elements				
	□ training seats/positions at	□ EMSA#			
Donominator Data Course	EMT-P Training Programs  LEMSA Records				
Denominator Data Source Population Subset	□ NA				
Numerator (N)					
Numerator	Inclusion Criteria	EMSA Data Elements			
	□ NA				
Numerator Data Source	□ NA				
Description of Indicator Formula	number value per 12 month period				
Indicator Formula	□ NA				
Numeric Expression					
Linkage	Linkage Options	EMSA Data Elements			
	☐ Provider	□ EMSA #29			
Stratification	Options	EMSA Data Elements			
	□ by age	<ul><li>□ EMSA #36</li><li>□ EMSA #38</li></ul>			
	<ul><li>□ by gender</li><li>□ by geographic location</li></ul>	□ EMSA #38			
Indicator Exclusion Criteria	by geographic location				
References	Committee on Accreditation	on of Educational Programs for			
110.0.00	Emergency Medical Service	ces Professions (CAEPEMSP)  lality Indicator Reporting Criteria			
	7 toologitation odiaoninos, Qu	any majorator responding official			

		Belford, Texas. 817 345-8519
	•	NHTSA (2000) EMS Educational Agenda for the Future; A
		Systems Approach, Washington DC; Government Print Office
	•	National Registry of EMT's; (1993) National EMS Education &
		Practice Blueprint. Columbia, Ohio
		Skelton MB, McSwain NE. A study of Cognitive and Technical
		Skills Deterioration Among Trained paramedics. JACEP 1997;6:
		436-438
Source		California EMSA Vision Project

CORE INDICATOR INDEX # ED1D	EN	IS EDUCATION & TRAINING				
Measure	Gr	Graduates per year: EMT-Paramedic				
CORE INDICATOR REF	ı	SYSTEM OPERATIONS				
#ED1	EC	DUCATION & TRAINING				
Objective		to measure the number of str California approved EMT-P t				
Classification		system ops - education	allilli	ig programs each year.		
Type of Measure		structural				
Domain of Performance		Volume				
Indicator Reporting Value		number per year				
Display Format		List				
Fraguency of Display		Cube Chart Monthly x 12				
Frequency of Display  Measures of Central		mean - No				
Tendency		mode - No				
,		variance - No				
		standard deviation - No				
Trending Analysis		NA				
Minimum Data Values		30 values per measure				
Sampling Aggregation		Periodic - Rate Yes				
Blinded	<u> </u>	Yes				
Beta Testing	<u> </u>	None to Date				
Population Denominator (D)		NA				
Denominator	Inc	clusion Criteria	EM:	SA Data Elements		
		graduates of Cal approved		EMSA #		
Denominator Data Source	1 -	EMT-P Training Programs MSA Records				
Population Subset		NA Records				
Numerator (N)	_	14/1				
Numerator	Inc	clusion Criteria	EM:	SA Data Elements		
		NA				
Numerator Data Source		NA				
Description of Indicator		number value per 12 month p	perio	d		
Formula		NA				
Indicator Formula Numeric Expression		NA				
Linkage	Liı	nkage Options	EM:	SA Data Elements		
Ţ.		name		EMSA #29		
		dob		EMSA #35		
		age		EMSA #36		
Stratification		gender Options		EMSA #38 EMSA Data Elements		
Stratification		by age		EMSA #36		
		by age by gender		EMSA #38		
Indicator Exclusion Criteria		zy genae.	_	2.11.67 ( 11.00		
References	•	Committee on Accreditation	n of	Educational Programs for		
		Emergency Medical Service				
	•	Accreditation Guidelines ; Qu		Indicator Reporting Criteria		
		Belford, Texas. 817 345-851				
	•	NHTSA (2000) EMS Education				
		Systems Approach, Washing				
	•	National Registry of EMT's; ( Practice Blueprint. Columbia				
		Skelton MB, McSwain NE. A				
				d paramedics. JACEP 1997;6:		

CORE INDICATOR INDEX # ED1E  Measure  CORE INDICATOR REF  #ED1  CORE INDICATOR REF  #ED1  System OPERATIONS  EDUCATION & TRAINING  COBjective  Classification  Type of Measure  Domain of Performance Indicator Reporting Value  Display Format  Frequency of Display  Measures of Central  Frequency of Display  Measures of Central  Tendency  Tendency  Tendency  Tending Analysis  Aggregation  Population Denominator (D)  Denominator  Denominator  Denominator Data Source  Population Subset  LEMSA Records  Population Subset  LEMSA Records  Population Formula  Numerator Indicator Formula  Numerator Data Source  Numerator Data Source  Numerator Data Source  Numerator Indicator Formula  Numerator Indicator Formula  Numerator Data Source  Numerator Data Source  Numerator Data Source  LEMSA Records  Population of Indicator Formula  Numerator Indicator Formula  Numerator Indicator Formula  Numerator Data Source  Population of Indicator Formula  Indicator Formula  Numerator Data Source  Population of Indicator Formula  Numerator Data Source  Population of Indicator Formula  Numerator Data Source  Population of Indicator Formula  Numerator Data Source  Numerator Data Source  Numerator Data Source  Numerator Data Source  Population of Indicator Formula  Numerator Data Source  Numerator Data Source  Numerator Data Source  Numerator Data Source  Population of Indicator Formula  Numerator Data Source  Numerator Data Source  Numerator Data Source  Population of Indicator Formula  Numerator Data Source  Numerator Dat		436-438	
CORE INDICATOR INDEX # ED15  Measure  Measure  **Licensed within 12 months of completion: EMT-P*  CORE INDICATOR REF #ED1  DUCATION & TRAINING  Objective  Dobjective  Understand approved EMT-P training programs that become employed as a licensed paramedic within 12 months  Calisoffication  Type of Measure  Domain of Performance Indicator Reporting Value  Domain of Performance Indicator Reporting Value  Domain of Performance Indicator Reporting Value  Dospiay Format  Tendency of Display  Measures of Central  Tendency of Display  Tending Analysis  Minimum Data Values  Sampling  Aggregation  Bilinded  Population Denominator (D)  Denominator  Denominator  Denominator  Denominator  Denominator  Denominator Data Source  Population Subset Numerator (N)  Numerator Data Source  Population Indicator Formula  Indicator Formula  Indicator Formula  Indicator Expression  Linkage  Understand Values Understand Valu	Source		ect
INDEX # ED1E   Measure   % Licensed within 12 months of completion; EMT-P			
INDEX # ED1E   Measure   % Licensed within 12 months of completion; EMT-P	CORF INDICATOR		
CORE INDICATOR REF #ED1			
CORE INDICATOR REF #ED1 Display		9/ Licensed within 12 months	of completion. EMT D
Management   EDUCATION & TRAINING	Weasure	% Licensed within 12 months	or completion; EMT-P
Management   EDUCATION & TRAINING	CORE INDICATOR REF	SYSTEM OPERATIONS	
Objective			
Calsification   system ops - education   structural   Ovolume   Ov	Objective		udents who graduate from
Classification   System ops - education	•		
Type of Measure   Structural   Domain of Performance   Volume   Monthing   Structural   Struct			medic within 12 months
Domain of Performance			
Indicator Reporting Value	7.		
Display Format			
Cube Chart			
Measures of Central	Display Format		
Measures of Central Tendency	Eroquency of Diamen		
Tendency   mode - No   variance - No   variance - No   standard deviation - Yes    Trending Analysis   NA   Minimum Data Values   30 values per measure   Sampling   Periodic - Rate   Yes    Aggregation   Yes   None to Date   None to Date   Population Denominator (D)   NA    Denominator   Inclusion Criteria   EMSA Data Elements   EMSA Praining Programs   EMSA # Emstandard EMT-P Training Programs   EMSA Data Elements   Graduates of Calidronia   Aumerator (N)   Graduation   Inclusion Criteria   EMSA Data Elements   EMSA Data Elements   Graduates employed as licensed paramedics within 12 months of graduation   Inclusion Criteria   EMSA Data Elements   EMSA Data Elements   Graduates of California   EMSA Data Elements   EMSA Data Elements   Graduates Licensed and employed as paramedics   EMSA Data Elements   EMSA #35   Galifornia   Graduates   EMSA #36   Galifornia   EMSA #36   EMSA #38   EMSA Data Elements   EMSA Bata Elemen		,	
variance - No			
Trending Analysis  Minimum Data Values Sampling Periodic - Rate Aggregation Periodic - Rate Aggregation Periodic - Rate  Aggregation Periodic - Rate  Aggregation Periodic - Rate  Aggregation Periodic - Rate  Aggregation Periodic - Rate  Aggregation Periodic - Rate  Beta Testing None to Date  Population Denominator (D) NA  Denominator Inclusion Criteria Population Subset Numerator (N) Numerator  Inclusion Criteria Population Subset Numerator (N) Numerator  Inclusion Criteria Population Subset Numerator Numerator Pormula Porduates of California approved EMT-P programs Graduates of California approved EMT-P programs Graduates Licensed and employed as paramedics  Population Subset Numerator Data Source Population Subset Numerator Pormula Porduates California Approved EMT-P Training Programs California Approved EMT-P Training Programs Poscription of Indicator Formula Population Subset Numerator (N) divided by Denominator (D) x 100 = %  Indicator Formula Population Subset Population Subset Numerator (N) divided by Denominator (D) x 100 = %  Indicator Expression Population Subset Po	rendency		
Trending Analysis   NA   Minimum Data Values   30 values per measure   Sampling   Periodic - Rate   Aggregation   Yes			
Minimum Data Values	Trending Analysis		
Sampling			
Aggregation   Yes   Blinded   Yes	Sampling		
Blinded Beta Testing		□ Yes	
NA   Denominator (D)   NA   Denominator   Inclusion Criteria   Graduates of Cal approved   EMT-P Training Programs   EMSA #   EMSA Records   Graduation Subset Numerator (N)   Graduation   Graduates of California   Approved EMT-P programs   EMSA Data Elements   EMSA Data Elements   Graduates of California   Approved EMT-P programs   EMSA#		□ Yes	
Denominator		■ None to Date	
Denominator Data Source Population Subset Numerator (N) Numerator   Graduates of Cal approved EMT-P Training Programs			
EMT-P Training Programs	Denominator		
Denominator Data Source   LEMSA Records   graduates employed as licensed paramedics within 12 months of graduation   Numerator (N)   Inclusion Criteria   EMSA Data Elements			<b>I</b>
Population Subset Numerator (N) graduates employed as licensed paramedics within 12 months of graduation    Numerator   Inclusion Criteria   EMSA Data Elements	D		
Numerator (N)       of graduation       EMSA Data Elements         Numerator       □ Graduates of California approved EMT-P programs       □ EMSA#         □ Graduates Licensed and employed as paramedics       □ LEMSA         □ California Approved EMT-P Training Programs         □ Description of Indicator Formula       □ N/D x 100 = %         Indicator Formula Numeric Expression       □ N/D x 100 = %         □ name       □ EMSA #29         □ dob       □ EMSA #35         □ age       □ EMSA #36         □ gender       □ EMSA #38         Stratification       Options       EMSA Data Elements         □ by age       □ EMSA #38         □ by gender       □ EMSA #38         □ by program       □ EMSA #38           □ Indicator Exclusion Criteria       • Non California Graduates			and margared in a within 10 magatha
Numerator		, ,	ised paramedics within 12 months
□ Graduates of California approved EMT-P programs □ Graduates Licensed and employed as paramedics  Numerator Data Source □ LEMSA □ California Approved EMT-P Training Programs  Description of Indicator Formula Indicator Formula Numeric Expression  Linkage □ N/D x 100 = %  EMSA Data Elements □ name □ EMSA #35 □ age □ EMSA #35 □ age □ EMSA #36 □ gender □ By age □ EMSA #38  Stratification Options EMSA Data Elements □ EMSA #38 □ By age □ EMSA #38 □ By age □ EMSA #38 □ by gender □ BMSA #38 □ by gender □ EMSA #38 □ By program □ EMSA #38 □ By program □ EMSA #38 □ BMSA #38 □ By program □ EMSA #38 □ BMSA #38 □ By program □ EMSA #38 □ BMSA #38			FMSA Data Flements
approved EMT-P programs Graduates Licensed and employed as paramedics    LEMSA	Numerator		
Graduates Licensed and employed as paramedics			
Numerator Data Source  □ LEMSA □ California Approved EMT-P Training Programs  Description of Indicator Formula □ N/D x 100 = %    Indicator Formula Numeric Expression			
Numerator Data Source  □ LEMSA □ California Approved EMT-P Training Programs  Description of Indicator Formula □ N/D x 100 = %    Indicator Formula Numeric Expression			
Description of Indicator Formula       Numerator (N) divided by Denominator (D) x 100 = %         Indicator Formula Numeric Expression       N/D x 100 = %         Linkage       Linkage Options       EMSA Data Elements         □ name       □ EMSA #35       □ EMSA #36         □ age       □ EMSA #38         Stratification       Options       EMSA Data Elements         □ by age       □ EMSA #36         □ by gender       □ EMSA #38         □ by program       □ EMSA #38         Indicator Exclusion Criteria       • Non California Graduates	Numerator Data Source		
Indicator Formula			
Indicator Formula Numeric Expression       N/D x 100 = %         Linkage       Linkage Options       EMSA Data Elements         □ name       □ EMSA #35         □ age       □ EMSA #36         □ gender       □ EMSA #38         Stratification       Options       EMSA Data Elements         □ by age       □ EMSA #36         □ by gender       □ EMSA #38         □ by program       □ EMSA #38         Indicator Exclusion Criteria       • Non California Graduates		□ Numerator (N) divided by De	enominator (D) x 100 = %
Numeric Expression  Linkage Linkage Options EMSA Data Elements  name EMSA #29  dob EMSA #35  age EMSA #36  gender EMSA #38  Stratification Options EMSA Data Elements  by age EMSA #36  by gender EMSA #36  by gender EMSA #38  Indicator Exclusion Criteria Non California Graduates		D N/D :: 400 0/	
Linkage Linkage Options		U N/D x 100 = %	
□ name □ dob □ age □ gender □ by age □ by gender □ by gender □ by gender □ by gender □ by program □ by program □ by non California Graduates □ comparison in the comparison i		Linkage Ontions	EMSA Data Flements
□ dob □ age □ gender □ EMSA #35 □ EMSA #38  Stratification Options EMSA Data Elements □ by age □ by gender □ by gender □ by gender □ by program □ EMSA #38 □ by program □ EMSA #38 □ by program □ EMSA #38	Lilikage		
□ age □ EMSA #36 □ gender □ EMSA #38  Stratification Options EMSA Data Elements □ by age □ EMSA #36 □ by gender □ EMSA #38 □ by program □ EMSA #38 □ by program □ EMSA #  Indicator Exclusion Criteria • Non California Graduates			
☐ gender ☐ EMSA #38  Stratification ☐ Options ☐ EMSA Data Elements ☐ by age ☐ EMSA #36 ☐ by gender ☐ EMSA #38 ☐ by program ☐ EMSA #38 ☐ by program ☐ EMSA #  Indicator Exclusion Criteria ● Non California Graduates			
Stratification Options EMSA Data Elements			
□ by age □ EMSA #36 □ by gender □ EMSA #38 □ by program □ EMSA #  Indicator Exclusion Criteria • Non California Graduates	Stratification		
□ by gender □ EMSA #38 □ by program □ EMSA #  Indicator Exclusion Criteria • Non California Graduates			
Indicator Exclusion Criteria • Non California Graduates			
			□ EMSA#
Not employed within 12 months of graduation.	Indicator Exclusion Criteria		
		Not employed within 12 mon	ths of graduation.

References	•	Committee on Accreditation of Educational Programs for Emergency Medical Services Professions (CAEPEMSP) Accreditation Guidelines; Quality Indicator Reporting Criteria Belford, Texas. 817 345-8519 NHTSA (2000) EMS Educational Agenda for the Future; A Systems Approach, Washington DC; Government Print Office National Registry of EMT's; (1993) National EMS Education & Practice Blueprint. Columbia, Ohio Skelton MB, McSwain NE. A study of Cognitive and Technical Skills Deterioration Among Trained paramedics. JACEP 1997;6: 436-438
Source		California EMSA Vision Project

CORE INDICATOR INDEX # ED1F	EN	IS EDUCATION & TRAINING		
Measure	<u>%</u>	Employed within 12 months:	; EN	/IT-P Graduates
CORE INDICATOR REF #ED1	_	STEM OPERATIONS DUCATION & TRAINING		
Objective		to measure the number of st		•
		California approved EMT-P to employed as a licensed para		
Classification		system ops - education		
Type of Measure		structural		
Domain of Performance		Volume		
Indicator Reporting Value Display Format		% List		
Display Format		Cube Chart		
Frequency of Display		Monthly x 12		
Measures of Central		mean - Yes		
Tendency		mode - No		
		variance - No standard deviation - Yes		
Trending Analysis		NA		
Minimum Data Values		30 values per measure		
Sampling		Periodic - Rate		
Aggregation		Yes		
Blinded		Yes		
Beta Testing		None to Date NA		
Population Denominator (D)  Denominator	Inc	NA Clusion Criteria	FM	ISA Data Elements
Denominator		Juston Orneria		IOA Data Licinents
		graduates of Cal approved EMT-P Training Programs		EMSA #
Denominator Data Source	LE	MSA Records		
Population Subset			sed	paramedics within 12 months
Numerator (N)		of graduation		
Numerator		Clusion Criteria Graduates of California		ISA Data Elements EMSA#
		approved EMT-P programs		LW3A#
		Graduates Licensed and		
		employed as paramedics		
Numerator Data Source		LEMSA	Frain	ing Drograma
Description of Indicator		California Approved EMT-P Numerator (N) divided by De		
Formula	1	. ,		
Indicator Formula		N/D x 100 = %		
Numeric Expression	l iv	okaga Ontiona	EM	ISA Data Elements
Linkage		nkage Options name		EMSA #29
		dob		EMSA #35
		age		EMSA #36
		gender		EMSA #38
Stratification		Options		EMSA Data Elements
		by age by gender		EMSA #36 EMSA #38
	ם כ	by program		EMSA #
Indicator Exclusion Criteria	•	Non California Graduates	1	
	•	Not employed within 12 mon		
References	•			f Educational Programs for
		Emergency Medical Service	ces	Professions (CAEPEMSP)

	•	Accreditation Guidelines; Quality Indicator Reporting Criteria Belford, Texas. 817 345-8519  NHTSA (2000) EMS Educational Agenda for the Future; A Systems Approach, Washington DC; Government Print Office National Registry of EMT's; (1993) National EMS Education & Practice Blueprint. Columbia, Ohio Skelton MB, McSwain NE. A study of Cognitive and Technical Skills Deterioration Among Trained paramedics. JACEP 1997;6: 436-
Source		California EMSA Vision Project
00000	. –	

CORE INDICATOR INDEX # ED1G	EMS EDUCATION & TRAINING	•
Measure	California Approved CE Provid	<u>ders</u>
CORE INDICATOR REF	SYSTEM OPERATIONS	
#ED1	EDUCATION & TRAINING	
Objective	to measure the number of Ca	alifornia Approved CE Providers
Classification	<ul><li>system ops - education</li></ul>	
Type of Measure	□ structural	
Domain of Performance	□ Volume	
Indicator Reporting Value	number per state	
Display Format	□ Listing	
Frequency of Display	☐ Cube Chart ☐ Monthly x 12	
Measures of Central	mean - No	
Tendency	mode - No	
rendency	variance - No	
	standard deviation - No	
Trending Analysis	□ NA	
Minimum Data Values	□ 30 values per measure	
Sampling	□ Periodic - Rate	
Aggregation	□ Yes	
Blinded	□ Yes	
Beta Testing	□ None to Date	
Population Denominator (D)	□ NA	
Denominator	Inclusion Criteria	EMSA Data Elements
	□ NA	EMSA
Denominator Data Source	LEMSA Records	
Population Subset	□ NA	
Numerator (N)	Inclusion Critoria	FMCA Data Flamenta
Numerator	Inclusion Criteria	EMSA Data Elements
Numerator Data Source	□ NA   □ NA	0
Description of Indicator	numeric value	
Formula		
Indicator Formula Numeric Expression	□ NA	
Linkage	Linkage Options	EMSA Data Elements
	name	□ EMSA #29
	dob	□ EMSA #35
	□ age	□ EMSA #36
Stratification	□ gender Options	□ EMSA #38  EMSA Data Elements
Stratification	□ by age	□ EMSA #36
	□ by age □ by gender	☐ EMSA #38
Indicator Exclusion Criteria		
References	Committee on Accreditation	on of Educational Programs for
	<ul> <li>Emergency Medical Servine</li> <li>Accreditation Guidelines; Qui Belford, Texas. 817 345-851</li> <li>NHTSA (2000) EMS Educati Systems Approach, Washing</li> <li>National Registry of EMT's; (Practice Blueprint. Columbia Skelton MB, McSwain NE. A</li> </ul>	ces Professions (CAEPEMSP) uality Indicator Reporting Criteria 9 onal Agenda for the Future; A gton DC; Government Print Office (1993) National EMS Education &

CORE INDICATOR INDEX # ED1H	EN	IS EDUCATION & TRAINING	
Measure		ımber of CEU's Offered per ` ılifornia Approved CE Provid	
CORE INDICATOR REF	SY	STEM OPERATIONS DUCATION & TRAINING	1010
Objective			tal Continuing education Hours
		offered in California by Califo	ornia Approved CE Providers
Classification		annually system ops - education	
Type of Measure	_	structural	
Domain of Performance	<u> </u>	Volume	
Indicator Reporting Value		hours per year	
Display Format		Listing	
		Cube Chart	
Frequency of Display		Monthly x 12	
Measures of Central Tendency		mean - No mode - No	
rendency		variance - No	
		standard deviation - No	
Trending Analysis		NA	
Minimum Data Values		30 values per measure	
Sampling		Periodic - Rate	
Aggregation		Yes	
Blinded		Yes None to Date	
Beta Testing Population Denominator (D)		NA	
Denominator		clusion Criteria	EMSA Data Elements
Donominato.		NA	□ EMSA #
Denominator Data Source	LE	MSA Records	
		ISA Records	
		Providers Records	
Population Subset Numerator (N)		NA	
Numerator	Inc	clusion Criteria	EMSA Data Elements
		NA	
Numerator Data Source		NA	
Description of Indicator Formula		numeric value	
Indicator Formula		NA	
Numeric Expression	_		
Linkage	Liı	nkage Options	EMSA Data Elements
		Provider	□ EMSA #29
Otratification		Geographic location	□ EMSA #35
Stratification		Options CE Provider	EMSA Data Elements  □ EMSA #36
		Geographic Location	□ EMSA #38
Indicator Exclusion Criteria		Josephine Localien	
References	•	Committee on Accreditation	on of Educational Programs for
			ces Professions (CAEPEMSP)
	•		uality Indicator Reporting Criteria
		Belford, Texas. 817 345-851	
	•		onal Agenda for the Future; A
			ton DC; Government Print Office
	•	Practice Blueprint. Columbia	1993) National EMS Education &
			study of Cognitive and Technical
			rained paramedics. JACEP 1997;6:

	436-438
Source	California FMSA Vision Project

CORE INDICATOR INDEX # MA1A	ALS UNIT CONFIGURATION			
Measure	Cardiac Arrest Survival Rate- 2	ALS Personnel		
CORE INDICATOR REF	SYSTEM OPRATIONS			
#MA1	MANPOWER			
Objective		survive to hospital discharge after		
		lar fibrillation (VF) or ventricular		
	ALS Response Unit that is sta	is unwitnessed and treated by a		
	personnel	alled by two (2) ALS level		
Classification	☐ System Ops – Manpower			
Type of Measure	□ outcome			
Domain of Performance	□ Effectiveness			
Indicator Reporting Value	□ %			
Display Format	□ Bar Chart			
	□ Line Graph			
Frequency of Display	□ Monthly x 12			
Measures of Central Tendency	□ mean - Yes □ mode - No			
rendency	□ variance - No			
	standard deviation - No			
Trending Analysis	□ NA			
Minimum Data Values	☐ 30 values per measure			
Sampling	□ Periodic - Rate			
Aggregation	□ Yes			
Blinded	□ Yes			
Beta Testing	□ None to Date			
Population Denominator (D)	the number of adult patients who suffer a pulseless VF or VT event unwitnessed by EMS personnel and are treated by an EMS Response Unit staffed with at least two (2) ALS level			
	personnel	(2) 7.20 10.00		
Denominator	Inclusion Criteria	EMSA Data Elements		
	patient has reached age 15	□ EMSA #36		
	□ patient has suffered a VF or VT event)	□ EMSA #64\/TAC 64\/EID		
	patient was pulseless	□ EMSA #54VTAC, 54VFIB □ EMSA #54C-A		
	(patient VF or VT	_ LMO/( #040 //		
	<ul><li>event was in prehospital setting</li></ul>	□ EMSA #54		
	□ patient VF & VT event was	□ EMSA #52		
	not witnessed by EMS			
	personnel	= FNOA #44		
	patient treated by an EMS	□ EMSA #11		
	Response Unit staffed with			
	at least two (2) ALS level personnel			
	specified queried time			
	period match numerator			
Denominator Data Source	□ EMS Medical Records			
Population Subset	☐ the number of patients who s	urvive to hospital discharge		
Numerator (N)				
Numerator	Inclusion Criteria	EMSA Data Elements		
	□ patients who survive to	□ discharge status (TBD)		
	hospital discharge			
Numerator Data Cauras	□ Subset of denominator			
Numerator Data Source	<ul><li>hospital discharge records</li><li>OSHPD discharge record</li></ul>			

Description of Indicator		numerator value (N) divided	numerator value (N) divided by denominator value (D) multiplied		
Formula		by 100 equals percentage (%	6)		
Indicator Formula		N / D = %			
Numeric Expression					
Linkage	Lir	kage Options	EN	ISA Data Elements	
		name		EMSA #29	
		dob		EMSA #35	
		age		EMSA #36	
		gender		EMSA #38	
		admit date		EMSA # ?	
		procedures		EMSA #73	
Stratification		Options		EMSA Data Elements	
		by age		EMSA #36	
		by gender		EMSA #38	
		by incident type		EMSA #8	
		by response times		EMSA #17-20	
		by scene times		EMSA #8	
	<b></b>	by number of defibrillations		EMSA #73 (99.62)	
		by provider level		EMOA #05	
Indicates Francisco Ositania	_			EMSA #25	
Indicator Exclusion Criteria		non-cardiac etiologies,	. a ait	ation was not attempted by	
		cardiac etiologies where resu EMS personnel	JSCIL	ation was not attempted by	
		event not witnessed by EMS personnel			
	) (	patient has not survived to he			
References				istics of Mid-Sized Urban EMS	
110.01011000		System. Ann Emerg Med. 19			
		,		tle 22, Social Security Division	
		9, Prehospital EMS 1991		,,	
		Utstein Model; Pitt, Penn Kas	ss LE	E. One Year Survival after	
				Itstein Model applied to Rural-	
		Suburban EMS System. Ann			
		Seattle Washington; Weaver			
		Improving Survival from Out	of H	ospital Cardiac Arrest.	
		Ann of Emerg Med 15:10;118	<u>31, 1</u>	986.	
Source		California EMSA Vision Proje	ect		

CORE INDICATOR INDEX # MA1B	ALS UNIT CONFIGURATION				
Measure	Ca	rdiac Arrest Survival Rate- 1	AL	S Personnel	
CORE INDICATOR REF	_	STEM OPRATIONS			
#MA1	MA	NPOWER			
Objective		to measure % of patients who suffering a pulseless ventricular		rvive to hospital discharge after	
				inwitnessed and treated by a	
				d by no more than one (1) ALS	
		level personnel		, , ,	
Classification		System Ops – Manpower			
Type of Measure		outcome			
Domain of Performance		□ Effectiveness			
Indicator Reporting Value		%			
Display Format		Bar Chart Line Graph			
Frequency of Display		Monthly x 12			
Measures of Central	<u> </u>	mean - Yes			
Tendency		mode - No			
		variance - No			
		standard deviation - No			
Trending Analysis		NA			
Minimum Data Values		30 values per measure			
Sampling		Periodic - Rate			
Aggregation Blinded		Yes Yes			
Beta Testing		None to Date			
Population Denominator (D)			who	suffer a pulseless VF or VT	
· oparation John mater (2)	event unwitnessed by EMS personnel and are treated by an EMS Response Unit staffed with no more than one (1) ALS level				
		personnel			
Denominator	Inc	lusion Criteria	EN	ISA Data Elements	
		patient has reached age 15		EMSA #36	
		patient has suffered a VF			
		or VT event)		EMSA #54VTAC, 54VFIB	
		patient was pulseless (patient VF or VT		EMSA #54C-A	
		event was in prehospital setting		EMSA #54	
		patient VF & VT event was		EMSA #52	
		not witnessed by EMS			
		personnel		ENACA (144	
		patient treated by an EMS		EMSA #11	
		Response Unit staffed with no more than (1) ALS level			
		personnel			
		specified queried time			
		period match numerator			
Denominator Data Source		EMS Medical Records			
Population Subset		the number of patients who s	urvi	ve to hospital discharge	
Numerator (N)		local and Only		ICA Data El	
Numerator		lusion Criteria		ISA Data Elements	
		patients who survive to hospital discharge		discharge status (TBD)	
		Subset of denominator			
Numerator Data Source		hospital discharge records	<u> </u>		
		OSHPD discharge record			

Description of Indicator		numerator value (N) divided	by d	enominator value (D) multiplied	
Formula		by 100 equals percentage (%	6)	` ' ' '	
Indicator Formula		N / D = %			
Numeric Expression					
Linkage	Lir	nkage Options	ΕN	ISA Data Elements	
		name		EMSA #29	
		dob		EMSA #35	
		age		EMSA #36	
		gender		EMSA #38	
		admit date		EMSA # ?	
		procedures		EMSA #73	
Stratification		Options		EMSA Data Elements	
		by age		EMSA #36	
		by gender		EMSA #38	
		by incident type		EMSA #8	
		by response times		EMSA #17-20	
		by scene times		EMSA #8	
		by number of defibrillations		EMSA #73 (99.62)	
		by provider level		ENACA "05	
La Participa de la Carta	_	P 0 1 2		EMSA #25	
Indicator Exclusion Criteria	0 (	non-cardiac etiologies,	:4	ation was not attempted by	
		cardiac etiologies where resuscitation was not attempted by EMS personnel			
		event not witnessed by EMS personnel			
		patient has not survived to he	•		
References			_	istics of Mid-Sized Urban EMS	
Kelefelices	_	System. Ann Emerg Med. 19			
		,		tle 22, Social Security Division	
	_	9, Prehospital EMS 1991		tio 22, Goolai Goodhiy Biviolon	
		Utstein Model; Pitt, Penn Kas	s LE	E. One Year Survival after	
		· · · · · · · · · · · · · · · · · · ·		Utstein Model applied to Rural-	
		Suburban EMS System. Ann			
		Seattle Washington; Weaver			
		Improving Survival from Out		· ·	
		Ann of Emerg Med 15:10		•	
Source		California EMSA Vision Proje			

CORE INDICATOR INDEX # MA1C	ALS UNIT CONFIGURATION			
Measure	Cri	tical Trauma Survival Rate-	2 AI	LS Personnel
CORE INDICATOR REF	ı	STEM OPRATIONS		
#MA1 Objective		NPOWER	0 011	rvive to hospital discharge for
Objective				criteria and treated by a ALS
		Response Unit that is staffed		
Classification		System Ops – Manpower		` ,
Type of Measure		outcome		
Domain of Performance		Effectiveness		
Indicator Reporting Value		%		
Display Format		Bar Chart		
Frequency of Display		Line Graph Monthly x 12		
Measures of Central	<u> </u>	mean - Yes		
Tendency		mode - No		
		variance - No		
		standard deviation - No		
Trending Analysis		NA		
Minimum Data Values		30 values per measure		
Sampling		Periodic - Rate		
Aggregation		Yes		
Blinded		Yes		
Beta Testing		None to Date		
Population Denominator (D)				meet critical trauma criteria as
				anism with GCS <10, BP<100 MS Response Unit staffed with
		at least two (2) ALS level per		
Denominator	Inc	lusion Criteria		ISA Data Elements
Delioninator				
Denominator	0			
Denominator	<b>o</b>	patient has reached age 15	0	EMSA #36
Denominator		patient has reached age 15 patient has met critical	0	
Denominator		patient has reached age 15 patient has met critical trauma criteria		EMSA #54
Denominator		patient has reached age 15 patient has met critical trauma criteria trauma event was in	0	
Denominator		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting		EMSA #54 EMSA #54
Denominator		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS		EMSA #54
Denominator		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with		EMSA #54 EMSA #54
Denominator		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS		EMSA #54 EMSA #54 EMSA #54
Denominator		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with at least two (2) ALS level personnel specified queried time		EMSA #54 EMSA #54 EMSA #54
		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with at least two (2) ALS level personnel specified queried time period match numerator		EMSA #54 EMSA #54 EMSA #54
Denominator Data Source		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with at least two (2) ALS level personnel specified queried time period match numerator EMS Medical Records		EMSA #54 EMSA #54 EMSA #54 EMSA #52
Denominator Data Source Population Subset		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with at least two (2) ALS level personnel specified queried time period match numerator		EMSA #54 EMSA #54 EMSA #54 EMSA #52
Denominator Data Source Population Subset Numerator (N)		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with at least two (2) ALS level personnel specified queried time period match numerator EMS Medical Records the number of patients who se		EMSA #54 EMSA #54 EMSA #54 EMSA #52 EMSA #11 ve to hospital discharge
Denominator Data Source Population Subset		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with at least two (2) ALS level personnel specified queried time period match numerator EMS Medical Records the number of patients who s	Gurvi	EMSA #54 EMSA #54 EMSA #54 EMSA #52 EMSA #11 ve to hospital discharge
Denominator Data Source Population Subset Numerator (N)		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with at least two (2) ALS level personnel specified queried time period match numerator EMS Medical Records the number of patients who selusion Criteria patients who survive to		EMSA #54 EMSA #54 EMSA #54 EMSA #52 EMSA #11 ve to hospital discharge
Denominator Data Source Population Subset Numerator (N)		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with at least two (2) ALS level personnel specified queried time period match numerator EMS Medical Records the number of patients who s	Gurvi	EMSA #54 EMSA #54 EMSA #54 EMSA #52 EMSA #11 ve to hospital discharge
Denominator Data Source Population Subset Numerator (N)		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with at least two (2) ALS level personnel specified queried time period match numerator EMS Medical Records the number of patients who selucions of the companion of the comp	Gurvi	EMSA #54 EMSA #54 EMSA #54 EMSA #52 EMSA #11 ve to hospital discharge
Denominator Data Source Population Subset Numerator (N) Numerator Numerator		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with at least two (2) ALS level personnel specified queried time period match numerator EMS Medical Records the number of patients who selusion Criteria patients who survive to hospital discharge Subset of denominator hospital discharge records OSHPD discharge record	Gurvivi	EMSA #54 EMSA #54 EMSA #54 EMSA #52 EMSA #11  ve to hospital discharge  ISA Data Elements discharge status (TBD)
Denominator Data Source Population Subset Numerator (N) Numerator  Numerator Data Source  Description of Indicator		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with at least two (2) ALS level personnel specified queried time period match numerator EMS Medical Records the number of patients who selusion Criteria patients who survive to hospital discharge Subset of denominator hospital discharge records OSHPD discharge record numerator value (N) divided	Gurvi	EMSA #54 EMSA #54 EMSA #54 EMSA #52 EMSA #11 ve to hospital discharge
Denominator Data Source Population Subset Numerator (N) Numerator  Numerator Data Source  Description of Indicator Formula		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with at least two (2) ALS level personnel specified queried time period match numerator EMS Medical Records the number of patients who selusion Criteria patients who survive to hospital discharge Subset of denominator hospital discharge records OSHPD discharge record numerator value (N) divided by 100 equals percentage (%)	Gurvi	EMSA #54 EMSA #54 EMSA #54 EMSA #52 EMSA #11  ve to hospital discharge  ISA Data Elements discharge status (TBD)
Denominator Data Source Population Subset Numerator (N) Numerator  Numerator Data Source  Description of Indicator Formula Indicator Formula		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with at least two (2) ALS level personnel specified queried time period match numerator EMS Medical Records the number of patients who selusion Criteria patients who survive to hospital discharge Subset of denominator hospital discharge records OSHPD discharge record numerator value (N) divided	Gurvi	EMSA #54 EMSA #54 EMSA #54 EMSA #52 EMSA #11  ve to hospital discharge  ISA Data Elements discharge status (TBD)
Denominator Data Source Population Subset Numerator (N) Numerator  Numerator Data Source  Description of Indicator Formula Indicator Formula Numeric Expression		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with at least two (2) ALS level personnel specified queried time period match numerator EMS Medical Records the number of patients who sellusion Criteria patients who survive to hospital discharge Subset of denominator hospital discharge records OSHPD discharge record numerator value (N) divided by 100 equals percentage (% N / D = %	survir	EMSA #54 EMSA #54 EMSA #54 EMSA #52 EMSA #11 ve to hospital discharge ISA Data Elements discharge status (TBD)
Denominator Data Source Population Subset Numerator (N) Numerator  Numerator Data Source  Description of Indicator Formula Indicator Formula		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with at least two (2) ALS level personnel specified queried time period match numerator EMS Medical Records the number of patients who selusion Criteria patients who survive to hospital discharge Subset of denominator hospital discharge records OSHPD discharge record numerator value (N) divided by 100 equals percentage (% N / D = %	BW 66)	EMSA #54 EMSA #54 EMSA #54 EMSA #52 EMSA #11  ve to hospital discharge  ISA Data Elements discharge status (TBD)  enominator value (D) multiplied
Denominator Data Source Population Subset Numerator (N) Numerator  Numerator Data Source  Description of Indicator Formula Indicator Formula Numeric Expression		patient has reached age 15 patient has met critical trauma criteria trauma event was in prehospital setting patient treated by an EMS Response Unit staffed with at least two (2) ALS level personnel specified queried time period match numerator EMS Medical Records the number of patients who sellusion Criteria patients who survive to hospital discharge Subset of denominator hospital discharge records OSHPD discharge record numerator value (N) divided by 100 equals percentage (% N / D = %	survir	EMSA #54 EMSA #54 EMSA #54 EMSA #52 EMSA #11 ve to hospital discharge ISA Data Elements discharge status (TBD)

	age		EMSA #36
	gender		EMSA #38
	admit date		EMSA#?
	procedures		EMSA #73
Stratification	Options		EMSA Data Elements
	by age		EMSA #36
	by gender		EMSA #38
	by incident type		EMSA #8
	by response times		EMSA #17-20
	by scene times		EMSA #8
Indicator Exclusion Criteria	non-traumatic etiologies,		
	traumatic etiologies where pa	itien	ts do not met critical trauma
	criteria		
	patient not treated by EMS p	erso	nnel
	patient treated by response u	ınit v	with no more than one (1) ALS
	personnel		
References			istics of Mid-Sized Urban EMS
	System. Ann Emerg Med. 19		
		ns Ti	tle 22, Social Security Division
	9, Prehospital EMS 1991		
	Utstein Model; Pitt, Penn Kas		
			Utstein Model applied to Rural-
	Suburban EMS System. Ann		
	Seattle Washington; Weaver		
	Improving Survival from Out		•
	Ann of Emerg Med 15:10		31, 1986.
Source	California EMSA Vision Proje	ect	

CORE INDICATOR INDEX # MA1D	ALS UNIT CONFIGURATION		
Measure	Critical Trauma Survival Rate- 1 ALS Personnel		
CORE INDICATOR REF #MA1	SYSTEM OPRATIONS MANPOWER		
Objective		who survive to hospital discharge for	
Objective		I trauma criteria and treated by a ALS	
		ffed by no more than one (1) ALS level	
	personnel	(,	
Classification	□ System Ops – Manpowe	r	
Type of Measure	outcome		
Domain of Performance	Effectiveness		
Indicator Reporting Value	□ %		
Display Format	□ Bar Chart		
Fraguency of Display	☐ Line Graph		
Frequency of Display Measures of Central	☐ Monthly x 12☐ mean - Yes		
Tendency	□ mode - No		
Tollaciley	□ variance - No		
	□ standard deviation - No		
Trending Analysis	□ NA		
Minimum Data Values	30 values per measure		
Sampling	□ Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	□ None to Date	nto vila manda siting language quitaria an	
Population Denominator (D)		nts who meet critical trauma criteria as	
	defined by EMS protocol; (Mechanism with GCS <10, BP<100 systolic,) and are treated by an EMS Response Unit staffed with		
	no more than one (1) AL		
Denominator	Inclusion Criteria	EMSA Data Elements	
	<ul><li>patient has reached age</li></ul>	15 🗖 EMSA #36	
	<ul> <li>patient has met critical</li> </ul>	D 5000 454	
	trauma criteria  trauma event was in	□ EMSA #54	
	<ul><li>trauma event was in prehospital setting</li></ul>	□ EMSA #54	
	□ patient treated by an EM	S 🛘 EMSA #54	
	Response Unit staffed wi		
	no more than one (1) AL		
	level personnel		
	□ specified queried time	- 5MOA "111	
Denominator Data Com	period match numerator	□ EMSA #11	
Denominator Data Source Population Subset	<ul><li>EMS Medical Records</li><li>the number of patients w</li></ul>	ho survive to hospital discharge	
Numerator (N)	□ Subset of denominator	no survive to nospital discharge	
Numerator	Inclusion Criteria EMSA Data Elements		
	<ul><li>patients who survive to</li></ul>	☐ discharge status (TBD)	
	hospital discharge		
Numerator Data Source	<ul><li>hospital discharge record</li><li>OSHPD discharge record</li></ul>		
Description of Indicator		led by denominator value (D) multiplied	
Formula	by 100 equals percentag		
Indicator Formula	□ N/D=%		
Numeric Expression			
Linkage	Linkage Options	EMSA Data Elements	
	□ name	□ EMSA #29	
	□ dob	□ EMSA #35	

	age		EMSA #36
	gender		EMSA #38
	admit date		EMSA#?
	procedures		EMSA #73
Stratification	Options		EMSA Data Elements
	by age		EMSA #36
	by gender		EMSA #38
	by incident type		EMSA #8
	by response times		EMSA #17-20
	by scene times		EMSA #8
Indicator Exclusion Criteria	non-traumatic etiologies,		
	traumatic etiologies where pa	itien	ts do not met critical trauma
	criteria		
	patient not treated by EMS p		
		ınit s	staffed with at least two (2) or
	more ALS personnel		
References			istics of Mid-Sized Urban EMS
	System. Ann Emerg Med. 19		
		ıs Ti	tle 22, Social Security Division
	9, Prehospital EMS 1991		
	Utstein Model; Pitt, Penn Kas		
			Itstein Model applied to Rural-
	Suburban EMS System. Ann		
	Seattle Washington; Weaver		
	Improving Survival from Out		
	Ann of Emerg Med 15:10		1, 1986.
Source	California EMSA Vision Proje	ect	

CORE INDICATOR INDEX # PP1A	PUBLIC EDUCATION & PREVENTION		
Measure	% Population Trained in Bystander CPR		
CORE INDICATOR REF #PP1A	SYSTEM OPERATIONS PUBLIC EDUCATION & PREVENTION		
Objective		adult population in a specific EMS response ned in bystander CPR.	
Classification		s – Public Education & Prevention	
Type of Measure	□ Structural	T done Eddodion & Frevention	
Domain of Performance	□ Volume/Frequence	eV	
Indicator Reporting Value	□ %	,	
Display Format	□ Listing		
	Cube Chart		
	Bar Chart		
	□ Line Graph		
Frequency of Display	■ Monthly x 12		
Measures of Central	□ mean - Yes		
Tendency	□ mode - No		
	□ variance - No	. NI-	
Transfer Analysis	□ standard deviation	1 - NO	
Trending Analysis Minimum Data Values	□ NA	001110	
Sampling	□ 30 values per me □ Periodic - Rate	asure	
Aggregation	☐ Yes		
Blinded	□ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)		ults in a specified geographic EMS response	
r opulation bonominator (b)	area	and in a specimed goograpine Livie response	
	Land of the Original of	EMSA Data Elements	
Denominator	Inclusion Criteria	EMSA Data Elements	
Denominator	□ Adult has reache	d age 15 ☐ EMSA #36	
Denominator	<ul><li>Adult has reache</li><li>Query is within a s</li></ul>	d age 15	
Denominator	□ Adult has reache □ Query is within a second geographic EMS is	d age 15	
Denominator	<ul><li>Adult has reache</li><li>Query is within a s</li></ul>	d age 15	
	□ Adult has reache □ Query is within a second geographic EMS reaches.	d age 15	
Denominator  Denominator Data Source	<ul> <li>Adult has reache</li> <li>Query is within a sequence geographic EMS reaches</li> <li>LEMSA Records</li> </ul>	d age 15	
Denominator Data Source	<ul> <li>Adult has reache</li> <li>Query is within a sequence geographic EMS reaches</li> <li>LEMSA Records</li> <li>Public Census reaches</li> </ul>	d age 15	
Denominator Data Source Population Subset	<ul> <li>Adult has reache</li> <li>Query is within a sequence geographic EMS is area.</li> <li>LEMSA Records</li> <li>Public Census records</li> <li>the number of additional control of additional cont</li></ul>	d age 15	
Denominator Data Source Population Subset Numerator (N)	<ul> <li>Adult has reache</li> <li>Query is within a sepending geographic EMS is area.</li> <li>LEMSA Records</li> <li>Public Census records</li> <li>the number of addispecified geographic geographic experiments</li> </ul>	d age 15	
Denominator Data Source Population Subset	<ul> <li>Adult has reache</li> <li>Query is within as geographic EMS rarea.</li> <li>LEMSA Records</li> <li>Public Census records</li> <li>the number of aduspecified geograp</li> <li>Inclusion Criteria</li> </ul>	d age 15	
Denominator Data Source Population Subset Numerator (N)	<ul> <li>Adult has reache</li> <li>Query is within as geographic EMS is area.</li> <li>LEMSA Records</li> <li>Public Census red the number of add specified geograp</li> <li>Inclusion Criteria</li> <li>Adult has reache</li> </ul>	d age 15	
Denominator Data Source Population Subset Numerator (N)	<ul> <li>Adult has reache</li> <li>Query is within as geographic EMS is area.</li> <li>LEMSA Records</li> <li>Public Census red the number of add specified geograp</li> <li>Inclusion Criteria</li> <li>Adult has reache</li> <li>Adult has taken as</li> </ul>	d age 15	
Denominator Data Source Population Subset Numerator (N)	<ul> <li>Adult has reache</li> <li>Query is within a segographic EMS is area.</li> <li>LEMSA Records</li> <li>Public Census records</li> <li>the number of addispecified geograp</li> <li>Inclusion Criteria</li> <li>Adult has reache</li> <li>Adult has taken an approved CPR training</li> </ul>	d age 15	
Denominator Data Source Population Subset Numerator (N)	<ul> <li>Adult has reache</li> <li>Query is within a sequence geographic EMS is area.</li> <li>LEMSA Records</li> <li>Public Census redestrictions of additions are program</li> <li>Adult has reached approved CPR traprogram</li> </ul>	d age 15	
Denominator Data Source Population Subset Numerator (N)	<ul> <li>Adult has reache</li> <li>Query is within a sependent of a sepecified geograp</li> <li>Inclusion Criteria</li> <li>Adult has reache</li> <li>Adult has taken an approved CPR traprogram</li> <li>Subset of numera</li> </ul>	d age 15	
Denominator Data Source Population Subset Numerator (N)	<ul> <li>Adult has reache</li> <li>Query is within a sependent of a sependent of a sepecified geograp</li> <li>Inclusion Criteria</li> <li>Adult has reache</li> <li>Adult has taken an approved CPR traprogram</li> <li>Subset of numera</li> </ul>	d age 15	
Denominator Data Source Population Subset Numerator (N)	<ul> <li>Adult has reache</li> <li>Query is within a sependent of a sependent of a sepecified geograp</li> <li>Inclusion Criteria</li> <li>Adult has reache</li> <li>Adult has taken an approved CPR traprogram</li> <li>Subset of numera</li> <li>Query is within a sependent of a sepecified geograp</li> </ul>	d age 15	
Denominator Data Source  Population Subset Numerator (N) Numerator	<ul> <li>Adult has reache</li> <li>Query is within a sequence of a sequence of</li></ul>	d age 15	
Denominator Data Source Population Subset Numerator (N)	<ul> <li>Adult has reache</li> <li>Query is within as geographic EMS is area.</li> <li>LEMSA Records</li> <li>Public Census red the number of add specified geograp</li> <li>Inclusion Criteria</li> <li>Adult has reache</li> <li>Adult has taken as approved CPR traprogram</li> <li>Subset of numera</li> <li>Query is within as geographic EMS is area as defined in denominator.</li> </ul>	d age 15	
Denominator Data Source  Population Subset Numerator (N) Numerator  Numerator	<ul> <li>Adult has reache</li> <li>Query is within as geographic EMS is area.</li> <li>LEMSA Records</li> <li>Public Census red specified geographic EMS is approved GPR transproyed CPR transprogram</li> <li>Subset of numerating Query is within as geographic EMS is area as defined in denominator.</li> <li>Public CPR Training LEMSA</li> </ul>	d age 15	
Denominator Data Source  Population Subset Numerator (N) Numerator	<ul> <li>Adult has reached Query is within a segeographic EMS is area.</li> <li>LEMSA Records</li> <li>Public Census reconstruction the number of adding specified geographic Edgeographic Edgeographic Edgeographic Edgeographic EMS is area as defined in denominator.</li> <li>Public CPR Training LEMSA</li> <li>numerator value (</li> </ul>	d age 15	
Denominator Data Source  Population Subset Numerator (N) Numerator  Numerator  Description of Indicator	<ul> <li>Adult has reache</li> <li>Query is within as geographic EMS is area.</li> <li>LEMSA Records</li> <li>Public Census red specified geographic EMS is approved GPR transproyed CPR transprogram</li> <li>Subset of numerating Query is within as geographic EMS is area as defined in denominator.</li> <li>Public CPR Training LEMSA</li> </ul>	d age 15	

Linkage	Linkage Options	EMSA Data Elements		
	□ name	□ EMSA #29		
	□ dob	□ EMSA #35		
	□ age	□ EMSA #36		
	□ gender	□ EMSA #38		
Stratification	Options	EMSA Data Elements		
	□ by age	□ EMSA #36		
	by gender	□ EMSA #38		
		□ EMSA #8		
Indicator Exclusion Criteria	<ul><li>Persons who have not reach</li></ul>			
	<ul><li>Persons not residing or emp Area.</li></ul>	loyed in specified EMS Response		
References				
	<ul> <li>National Highway Traffic Safety Administration (NHTSA); EMS Agenda for the Future, Washington, DC: Author</li> <li>Weaver, WD; Factors Influencing Survival of Out of Hospital Cardiac Arrest; J Am Coll Cardiol 7:752-757</li> </ul>			
Source	<ul> <li>California EMSA Vision Proje</li> </ul>	ect		

CORE INDICATOR INDEX # PP1B	PUBLIC EDUCATION & PREVENTION		
Measure	<u>%</u>	Response Area Population with PAD-AED Resources	<u>Frained</u>
CORE INDICATOR REF #PP1A	_	STEM OPERATIONS BLIC EDUCATION & PREVE	NTION
Objective			ation in a specific EMS response
			blic Access Defibrillation (PAD) or
Classification		Automatic Emergency Defibring system operations – Public E	Education & Prevention
Type of Measure	<u> </u>	Structural	education & Frevention
Domain of Performance		Volume/Frequency	
Indicator Reporting Value		%	
Display Format		Listing	
		Cube Chart	
		Bar Chart	
		Line Graph	
Frequency of Display		Monthly x 12	
Measures of Central Tendency		mean - Yes mode - No	
rendency		variance - No	
		standard deviation - No	
Trending Analysis		NA	
Minimum Data Values		30 values per measure	
Sampling		Periodic - Rate	
Aggregation		Yes	
Blinded		Yes	
Beta Testing		None to Date	
Population Denominator (D)			ecified geographic EMS response
Donominator	lma	area	EMCA Data Flamenta
Denominator	inc	lusion Criteria	EMSA Data Elements
		Adult has reached age 15	□ EMSA #36
		Query is within a specified	
		geographic EMS response	□ EMSA #54VTAC, 54VFIB
		area. Subset of numerator	□ EMSA #54C-A
		Subset of numerator	□ EMSA #54
Denominator Data Source	•	LEMSA Records	a LINOA #04
20110111111111111111111111111111111111		Public Census records	
Population Subset			trained in bystander CPR in a
Numerator (N)		specified geographic EMS re	
Numerator	Inc	lusion Criteria	EMSA Data Elements
		Adult has reached age 15	□ EMSA#
		Adult has taken an	
		approved PAD or AED	
		training program and has defibrillation resources	
		(units) readily available	
		within three minutes.	
		Query is within a specified	
		geographic EMS response	
		area as defined in	
		denominator.	
Numerator Data Source		Public PAD-AED Training Pr	ogram Records
		PAD Program Providers	
		AED Program Providers LEMSA	
Description of Indicator		numerator value (NI) divided	by demoninator value (D) multiplied

Formula	by 100 equals perce	ntage (%)	
Indicator Formula	□ N / D = %		
Numeric Expression			
Linkage	Linkage Options	EMSA Data Elements	
	<ul><li>Agency name</li></ul>	□ EMSA #29	
Stratification	Options	EMSA Data Elements	
	■ by age	□ EMSA #36	
	by gender	□ EMSA #38	
	by location	□ EMSA #8	
Indicator Exclusion Criteria		ot reached age 15 years.	
	<ul><li>Persons not residing</li></ul>	or employed in specified EMS Response	
	Area.		
References	<ul> <li>National Highway Trans</li> </ul>	affic Safety Administration (NHTSA);	
	EMS Agenda for the Future, Washington, DC: Author		
	Weaver, WD; Factors Influencing Survival of Out of Hospital		
	Cardiac Arrest; J Am Coll Cardiol 7:752-757		
Source	California EMSA Vision	on Project	

CORE INDICATOR Index # RE1A	SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRONCHOSPASM		
Measure	Oxygen: Frequency of Administration		
CORE INDICATOR REF	RESPIRATORY		
#RE1	TREATMENT PROTOCOL UTILIZATION		
Objective	to measure % of patients who exhibit signs & symptoms of shortness of breath with bronchospasm who receive oxygen a		
	part of treatment by EMS personnel in the Prehospital setting	3	
Classification	medical care - clinical		
Type of Measure	□ Process		
Domain of Performance	□ Compliance - frequency		
Indicator Reporting Value	<b>u</b> %		
Display Format	Listing		
	□ Cube Chart		
	<ul><li>□ Bar Chart</li><li>□ Line Graph</li></ul>		
	□ Process Control Chart		
Frequency of Display	□ Monthly x 12		
Measures of Central	mean - Yes		
Tendency	□ mode - No		
	□ variance - No		
	□ standard deviation - Yes		
Trending Analysis	□ NA		
Minimum Data Values	□ 30 values per measure		
Sampling	Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	None to Date     None to bate		
Population Denominator (D)	<ul> <li>patients who exhibit signs &amp; symptoms of shortness of breath with bronchospasm and are treated by EMS personnel in</li> </ul>		
Denominator	Prehospital setting Inclusion Criteria EMSA Data Elements		
2010			
	<ul><li>□ patient has reached age 15</li><li>□ EMSA #36</li><li>□ patients who exhibit signs</li></ul>		
	& symptoms of shortness		
	of breath with Branchespase EMSA #54C-A		
	bronchospasm  □ event was in prehospital  □ EMSA #54		
	setting		
	□ patient was treated by □ EMSA #52		
	EMS personnel		
	□ specified query time period		
Donominator Data Course	match numerator  EMS Medical Records		
Denominator Data Source	EMS Medical Records  the number of patients who receive oxygen administered by		
Population Subset Numerator (N)	the number of patients who receive oxygen administered by EMS personnel in Prehospital setting		
Numerator	Inclusion Criteria EMSA Data Elements		
Transcrator	□ patient has reached age 15 □ EMSA#		
	patients who receive		
	oxygen		
	□ patients who exhibit signs		
	& symptoms of shortness of breath		
	<ul><li>event was in prehospital setting</li></ul>		
	□ patient was treated by		
	EMS personnel		

	- 0 - ( ( ) - : :	
	□ Subset of denominator	
	□ specified query time period	
	match denominator	
Numerator Data Source	■ EMS Medical Records	
Description of Indicator		by denominator value (D) multiplied
Formula	by 100 equals percentage (	体)
Indicator Formula	□ N/D = %	
Numeric Expression		
Linkage	Linkage Options	EMSA Data Elements
	□ name	□ EMSA #29
	□ dob	□ EMSA #35
	□ age	□ EMSA #36
	□ gender	□ EMSA #38
	□ admit date	□ EMSA#?
	□ procedures	□ EMSA #73
Stratification	Options	EMSA Data Elements
	□ by age	□ EMSA #36
	□ by gender	□ EMSA #38
	□ by incident type	□ EMSA #8
	by incident type  by response times	□ EMSA #17-20
	by scene times	□ EMSA #8
	by provider level	□ EMSA #73
Indicator Exclusion Criteria	non-respiratory etiologies,	- LINIO/(II/O
Indicator Exclusion Criteria		treatment not attempted by EMS
	personnel	leatment not attempted by Livio
References		mergency Care; 3 <sup>rd</sup> Ed; Brady
Kelefelices		
	Publishing, 1997; 277-2	
		ed of the Use of Single vs.
		in the Treatment of Acute
Source		n Rv Respir Dis 1981;123:190
Source CODE INDICATOR	<ul><li>California EMSA Vision Proj</li></ul>	
CORE INDICATOR	☐ California EMSA Vision Proj SHORTNESS OF BREATH -	ect
CORE INDICATOR Index # RE1B	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO	NCHOSPASM
CORE INDICATOR	☐ California EMSA Vision Proj SHORTNESS OF BREATH -	NCHOSPASM
CORE INDICATOR Index # RE1B Measure	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO Oxygen: Desired Effect Achie	NCHOSPASM
CORE INDICATOR Index # RE1B Measure CORE INDICATOR REF	California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO Oxygen: Desired Effect Achie	ect  NCHOSPASM  ved
CORE INDICATOR Index # RE1B Measure CORE INDICATOR REF #RE1	California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO Oxygen: Desired Effect Achie RESPIRATORY TREATMENT PROTOCOL UTIL	ved ZATION
CORE INDICATOR Index # RE1B Measure CORE INDICATOR REF	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO Oxygen: Desired Effect Achie RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su	ved  ZATION fering from shortness of breath with
CORE INDICATOR Index # RE1B Measure CORE INDICATOR REF #RE1	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO Oxygen: Desired Effect Achie RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO Oxygen: Desired Effect Achie RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO Oxygen: Desired Effect Achie RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification Type of Measure	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO Oxygen: Desired Effect Achie RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical □ Outcome	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification Type of Measure Domain of Performance	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO Oxygen: Desired Effect Achie  RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical □ Outcome □ Effectiveness	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO Oxygen: Desired Effect Achie  RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical □ Outcome □ Effectiveness □ %	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification Type of Measure Domain of Performance	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO  Oxygen: Desired Effect Achie  RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical □ Outcome □ Effectiveness □ % □ List Chart	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO  Oxygen: Desired Effect Achie  RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical □ Outcome □ Effectiveness □ % □ List Chart □ Cube Chart	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO  Oxygen: Desired Effect Achie  RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical □ Outcome □ Effectiveness □ % □ List Chart □ Cube Chart □ Bar Chart	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO Oxygen: Desired Effect Achie RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical □ Outcome □ Effectiveness □ % □ List Chart □ Cube Chart □ Bar Chart □ Line Graph	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO Oxygen: Desired Effect Achie RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical □ Outcome □ Effectiveness □ % □ List Chart □ Cube Chart □ Bar Chart □ Line Graph □ Monthly x 12	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO  Oxygen: Desired Effect Achie  RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical □ Outcome □ Effectiveness □ % □ List Chart □ Cube Chart □ Bar Chart □ Line Graph □ Monthly x 12 □ mean - Yes	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO  Oxygen: Desired Effect Achie  RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical □ Outcome □ Effectiveness □ % □ List Chart □ Cube Chart □ Bar Chart □ Line Graph □ Monthly x 12 □ mean - Yes □ mode - No	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO  Oxygen: Desired Effect Achie  RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical □ Outcome □ Effectiveness □ % □ List Chart □ Cube Chart □ Bar Chart □ Bar Chart □ Line Graph □ Monthly x 12 □ mean - Yes □ mode - No □ variance - No	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO  Oxygen: Desired Effect Achie  RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical □ Outcome □ Effectiveness □ % □ List Chart □ Cube Chart □ Bar Chart □ Line Graph □ Monthly x 12 □ mean - Yes □ mode - No □ variance - No □ standard deviation - Yes	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO  Oxygen: Desired Effect Achie  RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical □ Outcome □ Effectiveness □ % □ List Chart □ Cube Chart □ Bar Chart □ Line Graph □ Monthly x 12 □ mean - Yes □ mode - No □ variance - No □ standard deviation - Yes □ NA	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis Minimum Data Values	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO  Oxygen: Desired Effect Achie  RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical □ Outcome □ Effectiveness □ % □ List Chart □ Cube Chart □ Bar Chart □ Line Graph □ Monthly x 12 □ mean - Yes □ mode - No □ variance - No □ standard deviation - Yes □ NA □ 30 values per measure	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis Minimum Data Values Sampling	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO  Oxygen: Desired Effect Achie  RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical □ Outcome □ Effectiveness □ % □ List Chart □ Cube Chart □ Bar Chart □ Line Graph □ Monthly x 12 □ mean - Yes □ mode - No □ variance - No □ standard deviation - Yes □ NA □ 30 values per measure □ Periodic - Rate	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from
CORE INDICATOR Index # RE1B Measure  CORE INDICATOR REF #RE1 Objective  Classification Type of Measure Domain of Performance Indicator Reporting Value Display Format  Frequency of Display Measures of Central Tendency  Trending Analysis Minimum Data Values	□ California EMSA Vision Proj SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRO  Oxygen: Desired Effect Achie  RESPIRATORY TREATMENT PROTOCOL UTIL □ to measure % of patients su bronchospasm who achieve the administration of oxygen □ Medical care - clinical □ Outcome □ Effectiveness □ % □ List Chart □ Cube Chart □ Bar Chart □ Line Graph □ Monthly x 12 □ mean - Yes □ mode - No □ variance - No □ standard deviation - Yes □ NA □ 30 values per measure	Ved  ZATION  Tering from shortness of breath with a desired therapeutic effect from

Beta Testing		None to Date		
Population Denominator (D)		□ the number of adult patients treated by EMS personnel for SOB		
		with bronchospsm who receive oxygen as part of their		
		treatment.		
Denominator	Inc	lusion Criteria	EM	ISA Data Elements
		maticat has marched and 45		ENACA "
		patient has reached age 15 patient treated by EMS		EMSA #
	-	personnel for shortness of		EMSA #
		breath or dyspnea.	]	EMSA #
		Patients with signs &		
		symptoms of		EMSA #
		bronchospasm		
		patients who receive		EMSA #
		oxygen by any modality or		
		device. event was in prehospital		
		setting		
		specified query time period		
Denominator Data Source		IS Medical Records	i	
Population Subset		the number of patients who r		, 0
Numerator (N)		effect is achieved in the Preh		
Numerator		lusion Criteria		ISA Data Elements
		patient's who are treated in		EMSA#
		prehospital setting Desired effect is any		
	-	change in patient status		
		where there is full or partial		
		relief of symptoms		
		desired effect is reported		
		by EMS personnel through		
		observation, assessment		
		or by verbal questioning of		
		patient. Subset of denominator		
Numerator Data Source		EMS Medical Records		
Description of Indicator			bv d	enominator value (D) multiplied
Formula		by 100 equals percentage (%)		
Indicator Formula				
Numeric Expression				
Linkage		kage Options		ISA Data Elements
		name dob		EMSA # EMSA #
		age	ם כ	EMSA #
		gender		EMSA #
		admit date		EMSA #
		procedures		EMSA #
Stratification		Options		EMSA Data Elements
		by age		EMSA #
		by gender by incident type		EMSA # EMSA #
		by response times		EMSA #
		by scene times		EMSA #
		by provider level	0	EMSA #
		• 1		
				EMSA #
Indicator Exclusion Criteria		non-cardiac etiologies,		
		cardiac etiologies where card	liac (	chest pain was not chief
		compliant		
		oxygen not administered		

	desired effect from oxygen administration not reported. event not treated by EMS personnel
References	<ul> <li>Bledsoe B, Paramedic Emergency Care; 3<sup>rd</sup> Ed; Brady Publishing. 1997; 277-279</li> <li>Rossing, TH; A Controlled of the Use of Single vs. Combined Drug Therapy in the Treatment of Acute Episodes of Asthma. Am Rv Respir Dis 1981;123:190</li> </ul>
Source	California EMSA Vision Project

CORE INDICATOR Index # RE1C	SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRONCHOSPASM			
Measure	Bronchodilator: Frequency of	Administration		
CORE INDICATOR REF	RESPIRATORY	17471011		
#RE1	TREATMENT PROTOCOL UTIL			
Objective	shortness of breath with bro	no exhibit signs & symptoms of		
	bronchodilator medication as			
	personnel in the Prehospital			
Classification	□ medical care - clinical			
Type of Measure	□ Process			
Domain of Performance	□ Compliance - frequency □ %			
Indicator Reporting Value Display Format	□ % □ Listing			
Display I offilat	☐ Cube Chart			
	□ Bar Chart			
	□ Line Graph			
	□ Process Control Chart			
Frequency of Display	☐ Monthly x 12			
Measures of Central	mean - Yes			
Tendency	□ mode - No □ variance - No			
	standard deviation - Yes			
Trending Analysis	□ NA			
Minimum Data Values	□ 30 values per measure			
Sampling	□ Periodic - Rate			
Aggregation	□ Yes			
Blinded	□ Yes			
Beta Testing	None to Date			
Population Denominator (D)		symptoms of shortness of breath treated by EMS personnel in		
Denominator	Inclusion Criteria	EMSA Data Elements		
20110111111111				
	patient has reached age 15	□ EMSA #36		
	patients who exhibit signs	□ EMCA #64\/TAC 64\/EID		
	& symptoms of shortness of breath with	□ EMSA #54VTAC, 54VFIB □ EMSA #54C-A		
	bronchospasm			
	<ul><li>event was in prehospital setting</li></ul>	□ EMSA #54		
	□ patient was treated by	□ EMSA #52		
	EMS personnel  specified query time period			
	match numerator			
Denominator Data Source	EMS Medical Records	1		
Population Subset	□ the number of patients who	receive a Bronchodilator medication		
Numerator (N)	administered by EMS perso			
Numerator	Inclusion Criteria	EMSA Data Elements		
	patient has reached age 15	□ EMSA#		
	<ul><li>patients who receive oxygen</li></ul>			
	patients who exhibit signs			
	& symptoms of shortness			
	of breath			
	<ul><li>event was in prehospital setting</li></ul>			
	patient was treated by			
	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			

Numerator Data Source Description of Indicator	0			enominator value (D) multiplied
Formula Indicator Formula		by 100 equals percentage (% N / D = %	6)	
Numeric Expression	_	N/ D = 70		
Linkage	Lir	kage Options	EN	ISA Data Elements
		name dob age gender admit date procedures		EMSA #29 EMSA #35 EMSA #36 EMSA #38 EMSA # ? EMSA #73
Stratification		Options		EMSA Data Elements
		by age by gender by incident type by response times by scene times by provider level	0 0 0 0 0 0	EMSA #36 EMSA #38 EMSA #8 EMSA #17-20 EMSA #8 EMSA #73
Indicator Exclusion Criteria		non-respiratory etiologies, respiratory etiologies where t personnel	reat	ment not attempted by EMS
References		<ul><li>Publishing. 1997; 277-27</li><li>Rossing, TH; A Controlle Combined Drug Therapy</li></ul>	9 d o in t i Rv	

CORE INDICATOR Index # RE1D	SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRONCHOSPASM  Bronchodilator: Desired Effect Ashieved			
Measure	Bronchodilator: Desired Effect	Achieved		
CORE INDICATOR REF	RESPIRATORY			
#RE1	TREATMENT PROTOCOL UTIL			
Objective		fering from shortness of breath with a desired therapeutic effect from		
		odilator drug administration in pre-		
	hospital setting.	and an angle and an		
Classification	Medical care - clinical			
Type of Measure	□ Outcome			
Domain of Performance	□ Effectiveness			
Indicator Reporting Value Display Format	□ % □ List Chart			
Display Format	☐ Cube Chart			
	□ Bar Chart			
	□ Line Graph			
Frequency of Display	☐ Monthly x 12			
Measures of Central	□ mean - Yes			
Tendency	mode - No			
	<ul><li>variance - No</li><li>standard deviation - Yes</li></ul>			
Trending Analysis	□ NA			
Minimum Data Values	☐ 30 values per measure			
Sampling	□ Periodic - Rate			
Aggregation	□ Yes			
Blinded	□ Yes			
Beta Testing	None to Date			
Population Denominator (D)	the number of adult patients shortness of breathe with broad	treated by EMS personnel for		
	Bronchodilator medication a			
	Prehospital setting.	F		
Denominator	Inclusion Criteria	EMSA Data Elements		
	□ patient has reached age 15	□ EMSA#		
	<ul><li>patient treated by EMS</li></ul>			
	personnel for shortness of	□ EMSA #		
	breathe with bronchospasm .	□ EMSA#		
	patients who receive	□ EMSA#		
	bronchodilator by any			
	modality or device.	□ EMSA#		
	<ul><li>event was in prehospital</li></ul>			
	setting			
Denominator Data Source	□ specified query time period EMS Medical Records			
Population Subset	☐ the number of patients who a	achieve a desired effect from		
Numerator (N)	Prehospital administration of			
Numerator	Inclusion Criteria	EMSA Data Elements		
	patient's who are treated in	□ EMSA#		
	prehospital setting  ☐ Desired effect is any			
	<ul><li>Desired effect is any change in patient status</li></ul>			
	where there is full or partial			
	relief of symptoms			
	□ desired effect is reported			
	by EMS personnel through			
	observation, assessment			

		or by verbal questioning of		
		patient.		
		Bronchodilator is a Beta 2		
		specific drug approved for		
		administration by local		
		EMS Authority via		
		inhalation or IV/IM/SQ		
		administration		
		Subset of denominator		
Numerator Data Source		EMS Medical Records		
Description of Indicator				nominator value (D) multiplied
Formula		by 100 equals percentage (%	5)	
Indicator Formula		N / D = %		
Numeric Expression				
Linkage	Lir	nkage Options		SA Data Elements
		name		EMSA #
		dob		EMSA #
		age		EMSA #
		gender		EMSA #
		admit date		EMSA #
		procedures		EMSA #
Stratification	٥	Options		EMSA Data Elements
Stratification		Options by age		EMSA Data Elements EMSA #
Stratification		Options by age by gender	0 0	EMSA Data Elements EMSA # EMSA #
Stratification		Options by age by gender by incident type	000	EMSA Data Elements EMSA # EMSA # EMSA #
Stratification		Options by age by gender by incident type by response times		EMSA Data Elements  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #
Stratification		Options by age by gender by incident type by response times by scene times		EMSA Data Elements  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #
		Options by age by gender by incident type by response times by scene times by provider level		EMSA Data Elements  EMSA #  EMSA #  EMSA #  EMSA #  EMSA #
Stratification  Indicator Exclusion Criteria		by age by gender by incident type by response times by scene times by provider level non-cardiac etiologies,		EMSA Data Elements  EMSA #
		by age by gender by incident type by response times by scene times by provider level non-cardiac etiologies, cardiac etiologies where card		EMSA Data Elements  EMSA #
		by age by gender by incident type by response times by scene times by provider level non-cardiac etiologies, cardiac etiologies where card	iac c	EMSA Data Elements  EMSA #
		by age by gender by incident type by response times by scene times by provider level non-cardiac etiologies, cardiac etiologies where card compliant Bronchodilator not administe	iac c	EMSA Data Elements  EMSA #
		by age by gender by incident type by response times by scene times by provider level non-cardiac etiologies, cardiac etiologies where card compliant Bronchodilator not administe desired effect from oxygen a	liac c	EMSA Data Elements  EMSA #  EMSA #  EMSA #
Indicator Exclusion Criteria		by age by gender by incident type by response times by scene times by provider level non-cardiac etiologies, cardiac etiologies where card compliant Bronchodilator not administe desired effect from oxygen a event not treated by EMS pe	iac c	EMSA Data Elements  EMSA #  EMSA #
		by age by gender by incident type by response times by scene times by provider level non-cardiac etiologies, cardiac etiologies where card compliant Bronchodilator not administe desired effect from oxygen a event not treated by EMS pe  • Bledsoe B, Paramedic E	iac c	EMSA Data Elements  EMSA #  EMSA #  EMSA #
Indicator Exclusion Criteria		by age by gender by incident type by response times by scene times by provider level non-cardiac etiologies, cardiac etiologies where card compliant Bronchodilator not administe desired effect from oxygen a event not treated by EMS pe  Bledsoe B, Paramedic E Publishing. 1997; 277-27	liac cored dmininground mergor 9	EMSA Data Elements  EMSA #  hest pain was not chief  stration not reported.  eleleency Care; 3 <sup>rd</sup> Ed; Brady
Indicator Exclusion Criteria		by age by gender by incident type by response times by scene times by provider level non-cardiac etiologies, cardiac etiologies where card compliant Bronchodilator not administe desired effect from oxygen a event not treated by EMS pe  Bledsoe B, Paramedic E Publishing. 1997; 277-27  Rossing, TH; A Controlle	iac c dminirsonn mergo d of	EMSA Data Elements  EMSA # hest pain was not chief  stration not reported.  iel ency Care; 3 <sup>rd</sup> Ed; Brady  the Use of Single vs.
Indicator Exclusion Criteria		by age by gender by incident type by response times by scene times by provider level non-cardiac etiologies, cardiac etiologies where card compliant Bronchodilator not administe desired effect from oxygen a event not treated by EMS pe  Bledsoe B, Paramedic E Publishing. 1997; 277-27 Rossing, TH; A Controlle Combined Drug Therapy	liac comergory	EMSA Data Elements  EMSA # hest pain was not chief  stration not reported. hele ency Care; 3 <sup>rd</sup> Ed; Brady the Use of Single vs. e Treatment of Acute
Indicator Exclusion Criteria		by age by gender by incident type by response times by scene times by provider level non-cardiac etiologies, cardiac etiologies where card compliant Bronchodilator not administe desired effect from oxygen a event not treated by EMS pe  Bledsoe B, Paramedic E Publishing. 1997; 277-27  Rossing, TH; A Controlle	liac cored dmining resonn mergor d of in the half of the half resonners.	EMSA Data Elements  EMSA # hest pain was not chief  stration not reported. hele ency Care; 3 <sup>rd</sup> Ed; Brady the Use of Single vs. e Treatment of Acute

CORE INDICATOR Index # RE1E	SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRONCHOSPASM			
Measure	Decrease or Relief of Sympton	n <u>s</u>		
CORE INDICATOR REF	RESPIRATORY	IZATION.		
#RE1	TREATMENT PROTOCOL UTIL			
Objective		o exhibit signs & symptoms of nchospasm that show a decrease or		
		ment by EMS personnel in the		
	prehospital setting	,		
Classification	■ Medical care - Clinical			
Type of Measure	Outcome			
Domain of Performance Indicator Reporting Value	<ul><li>□ Compliance - frequency</li><li>□ %</li></ul>			
Display Format	☐ List			
Diopiay i ormat	☐ Cube Chart			
	□ Bar Chart			
	□ Line Graph			
Frequency of Display Measures of Central	☐ Monthly x 12 ☐ mean - Yes			
Measures of Central Tendency	<ul><li>□ mean - Yes</li><li>□ mode - No</li></ul>			
Tolladiley	□ variance - No			
	□ standard deviation - Yes			
Trending Analysis	□ NA			
Minimum Data Values	□ 30 values per measure			
Sampling	□ Periodic - Rate			
Aggregation Blinded	☐ Yes☐ Yes			
Beta Testing	☐ None to Date			
Population Denominator (D)		symptoms of shortness of breath		
,	with bronchospasm and are t			
	Prehospital setting			
Denominator	Inclusion Criteria	EMSA Data Elements		
	□ patient has reached age 15	□ EMSA #36		
	<ul><li>patients who exhibit signs</li></ul>	= FMOA ((5.4)/TAO 5.4)/FID		
	& symptoms of shortness of breath with	<ul><li>□ EMSA #54VTAC, 54VFIB</li><li>□ EMSA #54C-A</li></ul>		
	bronchospasm	a Limon #540 A		
	<ul><li>event was in prehospital</li></ul>	□ EMSA #54		
	setting	<b></b>		
	□ patient was treated by	□ EMSA #52		
	EMS personnel  specified query time period			
	match numerator			
Denominator Data Source	EMS Medical Records			
Population Subset		how decrease or relief of symptoms		
Numerator (N)	after treatment by EMS person			
Numerator	Inclusion Criteria	EMSA Data Elements		
	patient has reached age 15	□ EMSA#		
	<ul><li>patients who receive</li></ul>			
	oxygen □ patients who show			
	decrease or relief of			
	symptoms after treatment			
	<ul><li>event was in prehospital</li></ul>			
	setting			
	<ul><li>patient was treated by EMS personnel</li></ul>			
	LIMO PELSOTITIEI			

		Subset of denominator		
		specified query time period		
		match numerator		
Numerator Data Source		EMS Medical Records		
Description of Indicator		numerator value (N) divided by denominator value (D) multip		
Formula		by 100 equals percentage (%)		
Indicator Formula		N / D = %		
Numeric Expression				
Linkage	Lir	nkage Options	EMSA Data Elements	
		name	□ EMSA #29	
		dob	□ EMSA #35	
		age	□ EMSA #36	
		gender	□ EMSA #38	
		admit date	□ EMSA#?	
		procedures	□ EMSA #73	
Stratification		Options	EMSA Data Elements	
Stratification			EMSA Data Elements  EMSA #36	
Stratification	0	Options		
Stratification		Options by age	□ EMSA #36	
Stratification		Options by age by gender by response times by scene times	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20	
	<u> </u>	Options by age by gender by response times by scene times by provider level	□ EMSA #36 □ EMSA #38 □ EMSA #8	
Stratification  Indicator Exclusion Criteria		Options by age by gender by response times by scene times	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20	
	0000	by age by gender by response times by scene times by provider level non-respiratory etiologies,	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20	
		by age by gender by response times by scene times by provider level non-respiratory etiologies, respiratory etiologies where to	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8  reatment not attempted by EMS	
		by age by gender by response times by scene times by provider level non-respiratory etiologies, respiratory etiologies where to personnel  Bledsoe B, Paramedic E	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8  reatment not attempted by EMS  mergency Care; 3 <sup>rd</sup> Ed; Brady	
Indicator Exclusion Criteria		by age by gender by response times by scene times by provider level non-respiratory etiologies, respiratory etiologies where to	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8  reatment not attempted by EMS  mergency Care; 3 <sup>rd</sup> Ed; Brady	
Indicator Exclusion Criteria		by age by gender by response times by scene times by provider level non-respiratory etiologies, respiratory etiologies where to personnel  Bledsoe B, Paramedic E Publishing. 1997; 277-27  Rossing, TH; A Controlle	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8  reatment not attempted by EMS  mergency Care; 3 <sup>rd</sup> Ed; Brady 9 d of the Use of Single vs.	
Indicator Exclusion Criteria		by age by gender by response times by scene times by provider level non-respiratory etiologies, respiratory etiologies where to personnel  Bledsoe B, Paramedic E Publishing. 1997; 277-27  Rossing, TH; A Controlle Combined Drug Therapy	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8  reatment not attempted by EMS  mergency Care; 3 <sup>rd</sup> Ed; Brady 9 d of the Use of Single vs. in the Treatment of Acute	
Indicator Exclusion Criteria		by age by gender by response times by scene times by provider level non-respiratory etiologies, respiratory etiologies where to personnel  Bledsoe B, Paramedic E Publishing. 1997; 277-27  Rossing, TH; A Controlle Combined Drug Therapy	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8  reatment not attempted by EMS  mergency Care; 3 <sup>rd</sup> Ed; Brady 9 d of the Use of Single vs. in the Treatment of Acute 1 Rv Respir Dis 1981;123:190	

CORE INDICATOR Index # RE1F	SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRONCHOSPASM			
Measure	Provider Impression Match ED	<u>Diagnosis</u>		
CORE INDICATOR REF	RESPIRATORY			
#RE1	TREATMENT PROTOCOL UTIL			
Objective		ose primary clinical impression of		
	personnel match emergency	chospasm as assessed by EMS		
Classification	□ Medical care - Clinical	department diagnosis.		
Type of Measure	□ Outcome			
Domain of Performance	□ Compliance - frequency			
Indicator Reporting Value	□ %			
Display Format	□ List			
	□ Cube Chart			
	□ Bar Chart			
Frequency of Display	☐ Line Graph ☐ Monthly x 12			
Measures of Central	mean - Yes			
Tendency	□ mode - No			
	□ variance - No			
	<ul><li>standard deviation - Yes</li></ul>			
Trending Analysis	□ NA			
Minimum Data Values	□ 30 values per measure			
Sampling	□ Periodic - Rate			
Aggregation Blinded	☐ Yes			
Beta Testing	☐ Yes☐ None to Date			
Population Denominator (D)		symptoms of shortness of breathe		
r operation bonomiator (b)		rted as primary impression by EMS		
Denominator	Inclusion Criteria	EMSA Data Elements		
	□ patient has reached age 15	□ EMSA #36		
	<ul><li>patients reported as signs</li></ul>			
	& symptoms of shortness	□ EMSA #54VTAC, 54VFIB		
	of breath with	□ EMSA #54C-A		
	bronchospasm as primary impression by EMS	□ EMSA #54		
	personnel	a EMISIT WOT		
	<ul><li>event was in prehospital</li></ul>	□ EMSA #52		
	setting			
	□ specified query time period			
Damamiustas D. (. O.	match numerator			
Denominator Data Source	EMS Medical Records	d by EMS paraappal, whore ED		
Population Subset Numerator (N)		d by EMS personnel where ED s of breath with bronchospasm		
Numerator	Inclusion Criteria	EMSA Data Elements		
	□ patient has reached age 15	□ EMSA#		
	<ul><li>patients treated by EMS</li></ul>			
	personnel			
	<ul><li>event was in prehospital</li></ul>			
	setting			
	☐ ED diagnosis indicates Shortness of breath with			
	bronchospasm or			
	equivalent description.			
	<ul><li>Subset of denominator</li></ul>			
	<ul><li>specified query time period</li></ul>			
	match numerator			

Numerator Data Source		EMS Medical Records			
Description of Indicator				enominator value (D) multiplied	
Formula		by 100 equals percentage (%	6)		
Indicator Formula		N / D = %			
Numeric Expression					
Linkage	Liı	nkage Options	ΕN	ISA Data Elements	
		name		EMSA #29	
		dob		EMSA #35	
		age		EMSA #36	
		gender		EMSA #38	
		admit date		EMSA # ?	
		procedures		EMSA #73	
Stratification		Options		EMSA Data Elements	
		by age		EMSA #36	
		by gender		EMSA #38	
		by response times		EMSA #8	
		by scene times		EMSA #17-20	
		by provider level		EMSA #8	
		by symptoms			
Indicator Exclusion Criteria		non-respiratory etiologies,			
		respiratory etiologies where t	treat	tment not attempted by EMS	
		personnel			
References		<ul> <li>Bledsoe B, Paramedic E</li> </ul>	mer	gency Care; 3 <sup>rd</sup> Ed; Brady	
		Publishing. 1997; 277-27	<b>'</b> 9		
		<ul> <li>Rossing, TH; A Controlle</li> </ul>			
		Combined Drug Therapy			
		•		Respir Dis 1981;123:190	
Source		California EMSA Vision Proje	ect		

	SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF BRONCHOSPASM			
Measure	Survival to Hospital Discharge	1		
CORE INDICATOR REF	RESPIRATORY			
#RE1	TREATMENT PROTOCOL UTIL			
Objective		ose primary clinical impression of		
		nchospasm as assessed by EMS		
Classification	personnel survive to hospita  Medical care - Clinical	discharge.		
Type of Measure	Outcome			
Domain of Performance	□ Effectiveness			
Indicator Reporting Value	□ %			
Display Format	□ List			
	□ Cube Chart			
	□ Bar Chart			
	□ Line Graph			
Frequency of Display	☐ Monthly x 12			
Measures of Central	□ mean - Yes □ mode - No			
Tendency	□ mode - No □ variance - No			
	standard deviation - Yes			
Trending Analysis				
Minimum Data Values	□ 30 values per measure			
Sampling	□ Periodic - Rate			
Aggregation	□ Yes			
Blinded	□ Yes			
Beta Testing	□ None to Date			
	with bronchospasm and repopersonnel.	orted as primary impression by EMS		
Denominator	Inclusion Criteria	EMSA Data Elements		
	□ patient has reached age 15	□ EMSA #36		
		□ EMSA #54C-A		
		□ FMSA #54		
		LIVIOA #04		
		□ EMSA #52		
	setting			
	<ul><li>specified query time period</li></ul>			
	match numerator			
		11 5140		
Numerator (N)	·	in who were discharged alive nom		
Numerator	·	FMSA Data Flements		
rumorator				
	patients treated by EMS	_		
	personnel			
	<ul><li>event was in prehospital</li></ul>			
	setting			
	· ·			
		1		
	bronchospasm			
	bronchospasm  Patient discharged alive			
Blinded	□ Yes □ None to Date □ patients who exhibit signs & with bronchospasm and representation.  Inclusion Criteria □ patient has reached age 15 □ patients reported as signs & symptoms of shortness of breath with bronchospasm as primary impression by EMS personnel □ event was in prehospital setting □ specified query time period match numerator  EMS Medical Records □ the number of patients treate of breathe with bronchospasm hospital.  Inclusion Criteria □ patient has reached age 15 □ patients treated by EMS personnel □ event was in prehospital setting □ Prehospital provider Impression indicates Shortness of breath with	EMSA Data Elements  EMSA #36  EMSA #  EMSA #  EMSA #54C-A  EMSA #54		

		Subset of denominator	
		specified query time period	
		match numerator	
Numerator Data Source		Hospital Discharge Records	
		OSHPD	
		EMS Medical Records	
Description of Indicator		numerator value (N) divided	by denominator value (D) multiplied
Formula		by 100 equals percentage (%	6)
Indicator Formula		N / D = %	
Numeric Expression			
Linkage	Lir	nkage Options	EMSA Data Elements
		name	□ EMSA #29
		dob	□ EMSA #35
		age	□ EMSA #36
		gender	□ EMSA #38
		admit date	□ EMSA#?
		procedures	■ EMSA #73
Stratification		Options	EMSA Data Elements
Stratification		<b>Options</b> by age	EMSA Data Elements  EMSA #36
Stratification	0		
Stratification		by age	□ EMSA #36
Stratification		by age by gender by response times by scene times	□ EMSA #36 □ EMSA #38
Stratification	<u> </u>	by age by gender by response times by scene times by provider level	□ EMSA #36 □ EMSA #38 □ EMSA #8
Stratification	0 0	by age by gender by response times by scene times by provider level by symptoms	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20
		by age by gender by response times by scene times by provider level	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20
Stratification  Indicator Exclusion Criteria		by age by gender by response times by scene times by provider level by symptoms non-respiratory etiologies,	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20
		by age by gender by response times by scene times by provider level by symptoms non-respiratory etiologies, respiratory etiologies where to	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8  reatment not attempted by EMS
Indicator Exclusion Criteria		by age by gender by response times by scene times by provider level by symptoms non-respiratory etiologies, respiratory etiologies where to personnel  Bledsoe B, Paramedic E	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8  reatment not attempted by EMS  mergency Care; 3 <sup>rd</sup> Ed; Brady
		by age by gender by response times by scene times by provider level by symptoms non-respiratory etiologies, respiratory etiologies where to	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8  reatment not attempted by EMS  mergency Care; 3 <sup>rd</sup> Ed; Brady
Indicator Exclusion Criteria		by age by gender by response times by scene times by provider level by symptoms non-respiratory etiologies, respiratory etiologies where to personnel  Bledsoe B, Paramedic E, Publishing, 1997; 277-27	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8  reatment not attempted by EMS  mergency Care; 3 <sup>rd</sup> Ed; Brady
Indicator Exclusion Criteria		by age by gender by response times by scene times by provider level by symptoms non-respiratory etiologies, respiratory etiologies where to personnel  Bledsoe B, Paramedic Et Publishing. 1997; 277-27  Rossing, TH; A Controlle Combined Drug Therapy	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8  reatment not attempted by EMS  mergency Care; 3 <sup>rd</sup> Ed; Brady 9 d of the Use of Single vs. in the Treatment of Acute
Indicator Exclusion Criteria		by age by gender by response times by scene times by provider level by symptoms non-respiratory etiologies, respiratory etiologies where to personnel  Bledsoe B, Paramedic Et Publishing. 1997; 277-27  Rossing, TH; A Controlle Combined Drug Therapy	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8  reatment not attempted by EMS  mergency Care; 3 <sup>rd</sup> Ed; Brady 9 d of the Use of Single vs.
Indicator Exclusion Criteria		by age by gender by response times by scene times by provider level by symptoms non-respiratory etiologies, respiratory etiologies where to personnel  Bledsoe B, Paramedic Et Publishing. 1997; 277-27  Rossing, TH; A Controlle Combined Drug Therapy	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8  reatment not attempted by EMS  mergency Care; 3 <sup>rd</sup> Ed; Brady 9 d of the Use of Single vs. in the Treatment of Acute n Rv Respir Dis 1981;123:190

CORE INDICATOR Index # RE2A	SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF FLUID OVERLOAD				
Measure	Oxygen: Frequency of Administration				
CORE INDICATOR REF #RE2	RESPIRATORY TREATMENT PROTOCOL UTIL				
Objective	to measure % of patients who exhibit signs & symptoms of shortness of breath with fluid overload who receive oxygen as part of treatment by EMS personnel in the Prehospital setting				
Classification	□ medical care - clinical				
Type of Measure	□ Process				
Domain of Performance	□ Compliance - frequency				
Indicator Reporting Value	<b>□</b> %				
Display Format	□ Listing □ Cube Chart □ Bar Chart □ Line Graph □ Process Control Chart				
Frequency of Display	☐ Monthly x 12				
Measures of Central Tendency	<ul><li>□ mean - Yes</li><li>□ mode - No</li><li>□ variance - No</li><li>□ standard deviation - Yes</li></ul>				
Trending Analysis	□ NA				
Minimum Data Values	□ 30 values per measure				
Sampling	□ Periodic - Rate				
Aggregation	□ Yes				
Blinded	□ Yes				
Beta Testing	□ None to Date				
Population Denominator (D)	<ul> <li>patients who exhibit signs &amp; swith fluid overload and are tree.</li> <li>Prehospital setting</li> </ul>	symptoms of shortness of breath eated by EMS personnel in			
Denominator	Inclusion Criteria	EMSA Data Elements			
	<ul> <li>patient has reached age 15</li> <li>patients who exhibit signs         <ul> <li>symptoms of shortness</li> <li>of breath with fluid</li> <li>overload</li> <li>event was in prehospital</li> <li>setting</li> <li>patient was treated by</li> <li>EMS personnel</li> <li>specified query time period</li> </ul> </li> </ul>	<ul> <li>□ EMSA #36</li> <li>□ EMSA #54VTAC, 54VFIB</li> <li>□ EMSA #54C-A</li> <li>□ EMSA #54</li> <li>□ EMSA #52</li> </ul>			

	mat	ch numerator		
Denominator Data Source	EMS Me	edical Records		
Population Subset Numerator (N)		number of patients who r S personnel in Prehospita	eceive oxygen administered by Il setting	
Numerator	Inclusio	on Criteria	EM	ISA Data Elements
Numerator Data Source	pati oxyy pati & sy of b eve sett EMS	ents who exhibit signs ymptoms of shortness reath nt was in prehospital		EMSA#
Description of Indicator Formula		nerator value (N) divided l 100 equals percentage (%		enominator value (D) multiplied
Indicator Formula Numeric Expression	□ N/	D = %		
Linkage	Linkage	e Options	EM	ISA Data Elements
	nam dob age gen adm	ne	EM	EMSA #29 EMSA #35 EMSA #36 EMSA #38 EMSA # ? EMSA #73
	nam dob age gen adm	der nit date		EMSA #29 EMSA #35 EMSA #36 EMSA #38 EMSA # ?
Linkage	nam dob age gen adm prod by a	der nit date cedures  Options age gender ncident type esponse times scene times orovider level -respiratory etiologies,		EMSA #29 EMSA #35 EMSA #36 EMSA #38 EMSA # ? EMSA #73  EMSA Data Elements  EMSA #36 EMSA #36 EMSA #38 EMSA #8 EMSA #8 EMSA #17-20 EMSA #8 EMSA #8 EMSA #8
Linkage	nam dob age gen adm proc by a by a by g by r non resp	der nit date cedures  Options age gender ncident type esponse times scene times orovider level -respiratory etiologies,		EMSA #29 EMSA #35 EMSA #36 EMSA #38 EMSA # ? EMSA #73  EMSA Data Elements  EMSA #36 EMSA #36 EMSA #38 EMSA #38 EMSA #8 EMSA #8 EMSA #17-20 EMSA #8
Linkage	nam dob age gen adm proof by a	der nit date cedures  Options age gender ncident type esponse times scene times provider level -respiratory etiologies, piratory etiologies where to sonnel American Heart Associat Cardiac Life Support; (20)	reation;	EMSA #29 EMSA #35 EMSA #36 EMSA #38 EMSA # ? EMSA #73  EMSA Data Elements  EMSA #36 EMSA #36 EMSA #38 EMSA #38 EMSA #38 EMSA #8 EMSA #73  ment not attempted by EMS  Textbook on Advanced gency Care; 3 <sup>rd</sup> Ed; Brady  Respiratory Distress

CORE INDICATOR Index # RE2B	SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF FLUID OVERLOAD		
Measure	Oxygen: Desired Effect Achieved		
CORE INDICATOR REF #RE2	RESPIRATORY TREATMENT PROTOCOL UTIL	ZATION	
Objective		fering from shortness of breath with	
		onary fluid overload who achieve a	
		om the administration of oxygen in	
Classification	pre-hospital setting.   Medical care - clinical		
Type of Measure	□ Outcome		
Domain of Performance	□ Effectiveness		
Indicator Reporting Value	□ %		
Display Format	□ List Chart		
	□ Cube Chart		
	<ul><li>□ Bar Chart</li><li>□ Line Graph</li></ul>		
Frequency of Display	☐ Monthly x 12		
Measures of Central	mean - Yes		
Tendency	□ mode - No		
	□ variance - No		
	□ standard deviation - Yes		
Trending Analysis	□ NA		
Minimum Data Values	☐ 30 values per measure ☐ Periodic - Rate		
Sampling Aggregation	□ Periodic - Rate □ Yes		
Blinded	☐ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)		treated by EMS personnel for SOB	
	with fluid overload who receive	ve oxygen as part of their treatment.	
Denominator	Inclusion Criteria	EMSA Data Elements	
	□ patient has reached age 15	□ EMSA#	
	patient treated by EMS	_	
	personnel for shortness of	□ EMSA #	
	breath or dyspnea.  Patients with signs &	□ EMSA#	
	symptoms of pulmonary	□ EMSA#	
	fluid overload	a Liviory	
	<ul><li>patients who receive</li></ul>	□ EMSA#	
	oxygen by any modality or		
	device.		
	<ul><li>event was in prehospital setting</li></ul>		
	specified query time period		
Denominator Data Source	EMS Medical Records		
Population Subset	the number of patients who r	eceive desired effect when oxygen	
Numerator (N)	is administered in Prehospital setting		
Numerator	Inclusion Criteria	EMSA Data Elements	
	<ul><li>patient's who are treated in prehospital setting</li></ul>	□ EMSA#	
	□ Desired effect is any		
	change in patient status		
	where there is full or partial		
	relief of symptoms		
	□ desired effect is reported		
	by EMS personnel through		
	observation, assessment		

		or by verbal questioning of		
		patient. Subset of denominator		
		Time period query match		
	_	denominator		
Numerator Data Source		EMS Medical Records		
Description of Indicator	10		ov d	enominator value (D) multiplied
Formula	•	by 100 equals percentage (%	-	chominator value (b) muniplied
Indicator Formula		N / D = %	7)	
Numeric Expression	_	117 2 = 70		
Linkage	Lir	kage Options	EN	ISA Data Elements
		name		EMSA #
		dob		EMSA #
		age		EMSA#
		gender		EMSA #
		admit date		EMSA #
		procedures		EMSA #
Stratification		Options		EMSA Data Elements
		by age		EMSA #
		by gender		EMSA #
		by incident type		
		by response times		_
		by scene times		EMSA #
		by provider level		EMSA #
				EMSA #
Indicator Exclusion Criteria		non-cardiac etiologies,	J	LIVIOA #
Indicator Exclusion Criteria	) (	cardiac etiologies where card	liac	chest nain was not chief
	_	compliant	iiao	onoot pain was not sinoi
		oxygen not administered		
		desired effect from oxygen a	dmir	nistration not reported.
		event not treated by EMS pe		
References		,		
		<ul> <li>American Heart Associat</li> </ul>	ion;	Textbook on Advanced
		Cardiac Life Support; (20		
		Bledsoe B, Paramedic E	mer	gency Care; 3 <sup>rd</sup> Ed; Brady
		Publishing. 1997; 277-27		
		<ul> <li>Hudson LD. Causes of A</li> </ul>	dult	Respiratory Distress
		Syndrome, Clin Chest M		982:3:1995
Source		California EMSA Vision Proje	ct	

CORE INDICATOR Index # RE2C	SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF FLUID OVERLOAD			
Measure	Nitroglycerine (NTG): Frequency of Administration			
CORE INDICATOR REF		RESPIRATORY		
#RE2		EATMENT PROTOCOL UTIL		
Objective		measure % of patients who ex		
		shortness of breath with fluid overload who receive a nitroglycerine (NTG) medication as part of treatment by EMS personnel in the		
		hospital setting		it by Live percention in the
Classification		medical care - clinical		
Type of Measure		Process		
Domain of Performance		Compliance - frequency		
Indicator Reporting Value		%		
Display Format		Listing Cuba Chart		
		Cube Chart Bar Chart		
	ם כ	Line Graph		
		Process Control Chart		
Frequency of Display		Monthly x 12		
Measures of Central		mean - Yes		
Tendency	]	mode - No		
		variance - No standard deviation - Yes		
Trending Analysis		NA		
Minimum Data Values		30 values per measure		
Sampling		Periodic - Rate		
Aggregation		Yes		
Blinded		Yes		
Beta Testing		None to Date		
Population Denominator (D)		patients who exhibit signs &		
		with fluid overload and are tro Prehospital setting	zaie	d by EMS personner in
Denominator	Inc	lusion Criteria	EN	ISA Data Elements
		patient has reached age 15		EMSA #36
		patients who exhibit signs & symptoms of shortness		EMSA #
		of breath with fluid		EMSA #54C-A
		overload	_	
		event was in prehospital		EMSA #54
		setting		5140A #50
		patient was treated by EMS personnel		EMSA #52
		specified query time period		
	_	match numerator		
Denominator Data Source	ΕN	S Medical Records		
Population Subset				ve a nitroglycerine medication
Numerator (N)	administered by EMS personnel in Prehospital setting			
Numerator		lusion Criteria		ISA Data Elements EMSA#
		patient has reached age 15 patients who receive		LIVIOA#
	_	oxygen		
		patients who exhibit signs		
		& symptoms of shortness		
		of breath		
		event was in prehospital		
		setting patient was treated by		
		patient was treated by		

		EMC personnel		
		EMS personnel		
		Subset of denominator		
		specified query time period		
		match numerator		
Numerator Data Source		EMS Medical Records		
Description of Indicator				enominator value (D) multiplied
Formula		by 100 equals percentage (%	6)	
Indicator Formula		N / D = %		
Numeric Expression				
Linkage	Lir	nkage Options	EN	ISA Data Elements
		name		EMSA #29
		dob		EMSA #35
		age		EMSA #36
		gender		EMSA #38
		admit date		EMSA # ?
		procedures		EMSA #73
Stratification		Options		EMSA Data Elements
		by age		EMSA #36
		by gender		EMSA #38
		by incident type		EMSA #8
		by response times		EMSA #17-20
		by scene times		EMSA #8
		by provider level		EMSA #73
Indicator Exclusion Criteria		non-respiratory etiologies,		
		respiratory etiologies where	reat	ment not attempted by EMS
		personnel		
References		American Heart Associat	ion;	Textbook on Advanced
		Cardiac Life Support; (20		
				gency Care; 3 <sup>rd</sup> Ed; Brady
		Publishing, 1997; 277-27		• • • • •
		Hudson LD. Causes of A		Respiratory Distress
		Syndrome, Clin Chest M		
Source		California EMSA Vision Proje		
000.00			7	

CORE INDICATOR	SHORTNESS OF BREATH -		
Index # RE2D	SIGNS & SYMPTOMS OF FLUII	D OVERLOAD	
Measure	Nitroglycerine: Desired Effect Achieved		
CORE INDICATOR REF	RESPIRATORY		
#RE2	TREATMENT PROTOCOL UTIL	IZATION	
Objective	shortness of breath with fluid	o exhibit signs & symptoms of loverload who receive a desired of nitroglycerine (NTG) medication personnel in the Prehospital	
Classification	□ Medical care - clinical		
Type of Measure	□ Outcome		
Domain of Performance	□ Effectiveness		
Indicator Reporting Value	□ %		
Display Format	□ List Chart □ Cube Chart □ Bar Chart □ Line Graph		
Frequency of Display	□ Monthly x 12		
Measures of Central Tendency	<ul> <li>□ mean - Yes</li> <li>□ mode - No</li> <li>□ variance - No</li> <li>□ standard deviation - Yes</li> </ul>		
Trending Analysis	□ NA		
Minimum Data Values	□ 30 values per measure		
Sampling	□ Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)		treated by EMS personnel for Imonary fluid overload - which t of their treatment.	
Denominator	Inclusion Criteria	EMSA Data Elements	
	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel.</li> <li>Fluid overload refers to cases where in the judgment of the EMS provider, the patient is in respiratory distress due to pulmonary fluid or congestion in the lungs.</li> </ul>	□ EMSA #	

		patients who receive nitroglycerine by any		
		modality or device.		
		event was in prehospital		
		setting		
Denominator Data Source	EV	specified query time period IS Medical Records		
Population Subset			PCP	ive a desired therapeutic effect
Numerator (N)	-	from the administration of nit		
		setting	9.	, coc a.cccpa.
Numerator	Inc	lusion Criteria	E۱	ISA Data Elements
		patient's who are treated in		EMSA#
		prehospital setting		
		Desired effect is any		
		change in patient status		
		where there is full or partial		
		relief of symptoms desired effect is reported		
	-	by EMS personnel through		
		observation, assessment		
		or by verbal questioning of		
		patient.		
		Subset of denominator		
		Time period query match		
		denominator		
Numerator Data Source		EMS Medical Records		(5)
Description of Indicator Formula				lenominator value (D) multiplied
Formula		by 100 equals percentage (%	P)	
Indicator Formula		N / D = %		
Indicator Formula Numeric Expression		N / D = %		
Indicator Formula Numeric Expression Linkage		N / D = %	EN	MSA Data Elements
Numeric Expression			EN	ISA Data Elements EMSA #
Numeric Expression	Lir	kage Options		EMSA # EMSA #
Numeric Expression	Lir	name dob age	0 0 0	EMSA # EMSA # EMSA #
Numeric Expression	Lir	nkage Options name dob age gender		EMSA # EMSA # EMSA # EMSA #
Numeric Expression	Lir	nkage Options name dob age gender admit date		EMSA # EMSA # EMSA # EMSA # EMSA #
Numeric Expression Linkage	Lir	name dob age gender admit date procedures		EMSA # EMSA # EMSA # EMSA # EMSA # EMSA #
Numeric Expression	Lir	nkage Options  name dob age gender admit date procedures  Options		EMSA #
Numeric Expression Linkage	Lir	nkage Options  name dob age gender admit date procedures  Options  by age		EMSA # EMSA # EMSA # EMSA # EMSA # EMSA #
Numeric Expression Linkage	Lir	nkage Options  name dob age gender admit date procedures  Options		EMSA #
Numeric Expression Linkage	Lir	nkage Options  name dob age gender admit date procedures  Options  by age by gender by incident type by response times		EMSA # EMSA Data Elements EMSA # EMSA # EMSA # EMSA # EMSA #
Numeric Expression Linkage	Lir	nkage Options  name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times		EMSA # EMSA Bata Elements EMSA #
Numeric Expression Linkage  Stratification	Lir	name dob age gender admit date procedures  Options by age by gender by incident type by response times by scene times by provider level		EMSA # EMSA Data Elements EMSA # EMSA # EMSA # EMSA # EMSA #
Numeric Expression Linkage	Lir	name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times by provider level non-respiratory etiologies,		EMSA # EMSA Bata Elements EMSA #
Numeric Expression Linkage  Stratification	Lir	name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times by provider level non-respiratory etiologies, nitroglycerine not administer	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EMSA # EMSA Data Elements  EMSA #
Numeric Expression Linkage  Stratification		name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times by provider level non-respiratory etiologies, nitroglycerine not administer desired effect from nitroglyce	ed trine	EMSA # EMSA Data Elements  EMSA #
Numeric Expression Linkage  Stratification  Indicator Exclusion Criteria	Lir	name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times by provider level non-respiratory etiologies, nitroglycerine not administer desired effect from nitroglyce events not treated by EMS p	ed erine	EMSA # EMSA Data Elements  EMSA #
Numeric Expression Linkage  Stratification		name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times by provider level non-respiratory etiologies, nitroglycerine not administer desired effect from nitroglyce events not treated by EMS p  • American Heart Associate	ed rine erso	EMSA # EMSA Data Elements  EMSA #
Numeric Expression Linkage  Stratification  Indicator Exclusion Criteria		name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times by provider level non-respiratory etiologies, nitroglycerine not administer desired effect from nitroglyce events not treated by EMS p  • American Heart Associat Cardiac Life Support; (20)	ed erine erscion;	EMSA # EMSA Data Elements  EMSA #
Numeric Expression Linkage  Stratification  Indicator Exclusion Criteria		name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times by provider level non-respiratory etiologies, nitroglycerine not administer desired effect from nitroglyce events not treated by EMS p  • American Heart Associat Cardiac Life Support; (20)	ed rine erscion;	EMSA # EMSA Data Elements  EMSA #
Numeric Expression Linkage  Stratification  Indicator Exclusion Criteria		name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times by provider level non-respiratory etiologies, nitroglycerine not administer desired effect from nitroglyce events not treated by EMS p  American Heart Associat Cardiac Life Support; (20 Bledsoe B, Paramedic E Publishing. 1997; 277-27 Hudson LD. Causes of A	ed rine erso (9)	EMSA # EMSA # EMSA # EMSA # EMSA # EMSA # EMSA BEMSA # EMSA # EMS
Numeric Expression Linkage  Stratification  Indicator Exclusion Criteria		name dob age gender admit date procedures  Options  by age by gender by incident type by response times by scene times by provider level non-respiratory etiologies, nitroglycerine not administer desired effect from nitroglyce events not treated by EMS p  American Heart Associat Cardiac Life Support; (20 Bledsoe B, Paramedic E Publishing. 1997; 277-27	ed rine erscion; 9 dult ed 1	EMSA # EMSA # EMSA # EMSA # EMSA # EMSA # EMSA BEMSA # EMSA # EMS

CORE INDICATOR Index # RE2E	SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF FLUID OVERLOAD		
Measure	Morphine Sulfate (MS): Frequency of Administration		
CORE INDICATOR REF #RE2	RESPIRATORY TREATMENT PROTOCOL UTILIZATION		
Objective	to measure % of patients who exhibit signs & symptoms of shortness of breath with fluid overload who receive a morphine sulfate medication as part of treatment by EMS personnel in the prehospital setting		
Classification	□ medical care - clinical		
Type of Measure	□ Process		
Domain of Performance	□ Compliance - frequency		
Indicator Reporting Value	□ %		
Display Format	□ Listing □ Cube Chart □ Bar Chart □ Line Graph □ Process Control Chart		
Frequency of Display	□ Monthly x 12		
Measures of Central Tendency	□ mean - Yes □ mode - No □ variance - No □ standard deviation - Yes		
Trending Analysis	□ NA		
Minimum Data Values	□ 30 values per measure		
Sampling	□ Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)	<ul> <li>patients who exhibit signs &amp; symptoms of shortness of breath with fluid overload and are treated by EMS personnel in Prehospital setting</li> </ul>		
Denominator	Inclusion Criteria EMSA Data Elements		
	□ patient has reached age 15 □ patients who exhibit signs     & symptoms of shortness     of breath with fluid     overload □ event was in prehospital     setting □ patient was treated by □ EMSA #54C-A □ EMSA #54C-A		

	EMS personnel  specified query time period	
	match numerator	□ EMSA #52
Denominator Data Source	EMS Medical Records	
Population Subset Numerator (N)	the number of patients who medication administered by setting	receive a morphine sulfate EMS personnel in Prehospital
Numerator	Inclusion Criteria	EMSA Data Elements
Numerator Data Source Description of Indicator	<ul> <li>patient has reached age 15</li> <li>patients who receive oxygen</li> <li>patients who exhibit signs &amp; symptoms of shortness of breath</li> <li>event was in prehospital setting</li> <li>patient was treated with morphine sulfate by EMS personnel</li> <li>Subset of denominator</li> <li>specified query time period match numerator</li> <li>EMS Medical Records</li> <li>numerator value (N) divided</li> </ul>	□ EMSA#
Formula	by 100 equals percentage (	
Indicator Formula	□ N / D = %	,,,
Numeric Expression		
Numeric Expression Linkage	Linkage Options	EMSA Data Elements
	□ name □ dob □ age □ gender □ admit date	EMSA Data Elements  EMSA #29 EMSA #35 EMSA #36 EMSA #38 EMSA # ? EMSA # ? EMSA #73
	□ name □ dob □ age □ gender	☐ EMSA #29 ☐ EMSA #35 ☐ EMSA #36 ☐ EMSA #38 ☐ EMSA # ?
Linkage	□ name □ dob □ age □ gender □ admit date procedures  Options □ by age □ by gender □ by incident type □ by response times □ by scene times □ by provider level	□ EMSA #29 □ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ? □ EMSA #73
Linkage	□ name □ dob □ age □ gender □ admit date procedures  Options □ by age □ by gender □ by incident type □ by response times □ by scene times □ by provider level □ non-respiratory etiologies, □ respiratory etiologies where personnel	□ EMSA #29 □ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ? □ EMSA #73  EMSA Data Elements □ EMSA #36 □ EMSA #38 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8 □ EMSA #73  treatment not attempted by EMS
Linkage Stratification	□ name □ dob □ age □ gender □ admit date procedures  Options □ by age □ by gender □ by incident type □ by response times □ by scene times □ by provider level □ non-respiratory etiologies, □ respiratory etiologies where personnel  • American Heart Associa Cardiac Life Support; (2 • Bledsoe B, Paramedic E Publishing. 1997; 277-22	□ EMSA #29 □ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ? □ EMSA #73  EMSA Data Elements □ EMSA #36 □ EMSA #38 □ EMSA #38 □ EMSA #8 □ EMSA #8 □ EMSA #8 □ EMSA #73  treatment not attempted by EMS  tion; Textbook on Advanced 000) Emergency Care; 3 <sup>rd</sup> Ed; Brady 79 Adult Respiratory Distress 1ed 1982:3:1995

CORE INDICATOR	SHORTNESS OF BREATH -		
Index # RE2F	SIGNS & SYMPTOMS OF FLUID	O OVERLOAD	
Measure	Morphine Sulfate: Desired Effect Achieved		
CORE INDICATOR REF	RESPIRATORY		
#RE2	TREATMENT PROTOCOL UTIL	IZATION	
Objective	signs and symptoms of pulme	fering from shortness of breath with onary fluid overload who achieve a om the administration of morphine in	
Classification	☐ Medical care - clinical		
Type of Measure	□ Outcome		
Domain of Performance	□ Effectiveness		
Indicator Reporting Value	□ %		
Display Format	<ul><li>□ List Chart</li><li>□ Cube Chart</li><li>□ Bar Chart</li><li>□ Line Graph</li></ul>		
Frequency of Display	☐ Monthly x 12		
Measures of Central Tendency	<ul> <li>□ mean - Yes</li> <li>□ mode - No</li> <li>□ variance - No</li> <li>□ standard deviation - Yes</li> </ul>		
Trending Analysis	□ NA		
Minimum Data Values	□ 30 values per measure		
Sampling	□ Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)		treated by EMS personnel for d overload that receive morphine	
Denominator	Inclusion Criteria	EMSA Data Elements	
	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for SOB with signs and symptoms of pulmonary fluid overload.</li> <li>patients who receive morphine by any modality or device.</li> <li>event was in prehospital setting</li> <li>specified query time period</li> </ul>	□ EMSA #	
Denominator Data Source	EMS Medical Records		

Population Subset Numerator (N)	the number of patients who achieve a desired therapeutic effect after administration of morphine in the Prehospital setting		
Numerator	Inclusion Criteria	EMSA Data Elements	
	<ul> <li>patient's who are treated in prehospital setting</li> <li>Desired effect is any change in patient status where there is full or partial relief of symptoms</li> <li>desired effect is reported by EMS personnel through observation, assessment or by verbal questioning of patient.</li> <li>Subset of Denominator</li> <li>Time period query match denominator</li> <li>EMS Medical Records</li> </ul>	□ EMSA#	
Numerator Data Source		(5)	
Description of Indicator Formula	<ul> <li>numerator value (N) divided by denominator value (D) multiplied by 100 equals percentage (%)</li> </ul>		
Indicator Formula	□ N / D = %		
Numeric Expression			
Linkage	Linkage Options	EMSA Data Elements	
	<ul> <li>name</li> <li>dob</li> <li>age</li> <li>gender</li> <li>admit date</li> <li>procedures</li> </ul>	□ EMSA #	
Stratification	Options	EMSA Data Elements	
	<ul> <li>by age</li> <li>by gender</li> <li>by incident type</li> <li>by response times</li> <li>by scene times</li> </ul>	□ EMSA #	
Indicator Exclusion Criteria	<ul><li>morphine not administered</li><li>desired effect from morphine</li><li>event not treated by EMS pe</li></ul>	rsonnel	
References	<ul> <li>American Heart Association; Textbook on Advanced Cardiac Life Support; (2000)</li> <li>Bledsoe B, Paramedic Emergency Care; 3<sup>rd</sup> Ed; Brady Publishing. 1997; 277-279</li> <li>Hudson LD. Causes of Adult Respiratory Distress Syndrome, Clin Chest Med 1982:3:1995</li> <li>California EMSA Vision Project</li> </ul>		
CORE INDICATOR	SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF FLUI	D OVERLOAD	

Index # RE2G			
Measure	Furosemide: Frequency Admi	nistration	
CORE INDICATOR REF	RESPIRATORY		
#RE2	TREATMENT PROTOCOL UTILIZATION		
Objective	to measure % of patients who exhibit signs & symptoms of shortness of breath with fluid overload who receive a Furosemide medication as part of treatment by EMS personnel in the Prehospital setting		
Classification	□ medical care - clinical		
Type of Measure	□ Process		
Domain of Performance	□ Compliance - frequency		
Indicator Reporting Value	□ %		
Display Format	□ Listing □ Cube Chart □ Bar Chart □ Line Graph □ Process Control Chart		
Frequency of Display	☐ Monthly x 12		
Measures of Central Tendency	<ul><li>□ mean - Yes</li><li>□ mode - No</li><li>□ variance - No</li><li>□ standard deviation - Yes</li></ul>		
Trending Analysis	□ NA		
Minimum Data Values	□ 30 values per measure		
Sampling	□ Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)	<ul> <li>patients who exhibit signs &amp; with fluid overload and are treprehospital setting</li> </ul>	symptoms of shortness of breath eated by EMS personnel in	
Denominator	Inclusion Criteria	EMSA Data Elements	
	<ul> <li>patient has reached age 15</li> <li>patients who exhibit signs         <ul> <li>symptoms of shortness</li> <li>of breath with fluid</li> <li>overload</li> <li>event was in prehospital</li> <li>setting</li> <li>patient was treated by</li> <li>EMS personnel</li> <li>Subset of denominator</li> <li>specified query time period</li> <li>match numerator</li> </ul> </li> </ul>	□ EMSA #36 □ EMSA # □ EMSA #54C-A □ EMSA #54	

Denominator Data Source	EMS Medical Records	
Population Subset Numerator (N)	the number of patients who receive furosemide medication administered by EMS personnel in Prehospital setting	
Numerator	Inclusion Criteria	EMSA Data Elements
Numerator Data Source	<ul> <li>patient has reached age 15</li> <li>patients who receive oxygen</li> <li>patients who exhibit signs &amp; symptoms of shortness of breath</li> <li>event was in prehospital setting</li> <li>patient was treated with Furosemide by EMS personnel</li> <li>specified query time period match numerator</li> <li>EMS Medical Records</li> </ul>	□ EMSA#
Description of Indicator	□ numerator value (N) divided	by denominator value (D) multiplied
Formula Indicator Formula Numeric Expression	by 100 equals percentage (9	6)
Linkage	Linkage Options	EMSA Data Elements
	□ name □ dob □ age □ gender □ admit date □ procedures	☐ EMSA #29 ☐ EMSA #35 ☐ EMSA #36 ☐ EMSA #38 ☐ EMSA # ? ☐ EMSA #73
Stratification	Options	EMSA Data Elements
	□ by age □ by gender □ by incident type □ by response times □ by scene times □ by provider level	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8 □ EMSA #73
Indicator Exclusion Criteria	<ul><li>non-respiratory etiologies,</li><li>respiratory etiologies where personnel</li></ul>	treatment not attempted by EMS
References	<ul> <li>American Heart Associa Cardiac Life Support; (2</li> <li>Bledsoe B, Paramedic E Publishing. 1997; 277-27</li> </ul>	mergency Care; 3 <sup>rd</sup> Ed; Brady 79 Adult Respiratory Distress led 1982:3:1995
Source		

CORE INDICATOR	SHORTNESS OF BREATH -	
Index # RE2H	SIGNS & SYMPTOMS OF FLUID	O OVERLOAD
Measure	Furosemide: Desired Effect Ac	hieved
CORE INDICATOR REF	RESPIRATORY	
#RE2	TREATMENT PROTOCOL UTIL	
Objective		
Classification	☐ Medical care - clinical	
Type of Measure	□ Outcome	
Domain of Performance	□ Effectiveness	
Indicator Reporting Value	<b>□</b> %	
Display Format	□ List Chart □ Cube Chart □ Bar Chart □ Line Graph	
Frequency of Display	☐ Monthly x 12	
Measures of Central Tendency	<ul> <li>□ mean - Yes</li> <li>□ mode - No</li> <li>□ variance - No</li> <li>□ standard deviation - Yes</li> </ul>	
Trending Analysis	□ NA	
Minimum Data Values	□ 30 values per measure	
Sampling	□ Periodic - Rate	
Aggregation	□ Yes	
Blinded	□ Yes	
Beta Testing	□ None to Date	
Population Denominator (D)		treated by EMS personnel for d overload that receive Furosemide
Denominator	Inclusion Criteria	EMSA Data Elements
	<ul> <li>patient has reached age 15</li> <li>patient treated by EMS personnel for SOB with signs and symptoms of pulmonary fluid overload.</li> <li>patients who receive Furosemide by any modality or device.</li> <li>event was in prehospital setting</li> </ul>	□ EMSA# □ EMSA# □ EMSA# □ EMSA#

	<ul><li>specified query time period</li></ul>	
Denominator Data Source	EMS Medical Records	
Population Subset Numerator (N)		chieve a desired therapeutic effect mide in the prehospital setting
Numerator	Inclusion Criteria	EMSA Data Elements
Numerator Data Source	<ul> <li>patient's who are treated in prehospital setting</li> <li>Desired effect is any change in patient status where there is full or partial relief of symptoms</li> <li>desired effect is reported by EMS personnel through observation, assessment or by verbal questioning of patient.</li> <li>Subset of Denominator</li> <li>Time period query match denominator</li> <li>EMS Medical Records</li> </ul>	□ EMSA#
Description of Indicator Formula	numerator value (N) divided by 100 equals percentage (%	by denominator value (D) multiplied b)
Indicator Formula Numeric Expression	□ N/D = %	
Linkage	Linkage Options	EMSA Data Elements
	□ name □ dob □ age □ gender □ admit date □ procedures	□ EMSA #
Stratification	Options	EMSA Data Elements
	<ul> <li>by age</li> <li>by gender</li> <li>by incident type</li> <li>by response times</li> <li>by scene times</li> </ul>	□ EMSA #
Indicator Exclusion Criteria	<ul> <li>by gender</li> <li>by incident type</li> <li>by response times</li> <li>by scene times</li> </ul> furosemide not administered <ul> <li>furosemide administration no</li> <li>event not treated by EMS pe</li> </ul>	□ EMSA # □ treported.
Indicator Exclusion Criteria References Source	<ul> <li>by gender</li> <li>by incident type</li> <li>by response times</li> <li>by scene times</li> <li>furosemide not administered furosemide administration not event not treated by EMS pe</li> <li>American Heart Associat Cardiac Life Support; (20)</li> <li>Bledsoe B, Paramedic E Publishing. 1997; 277-27</li> </ul>	□ EMSA #  t reported. rsonnel ion; Textbook on Advanced 000) mergency Care; 3 <sup>rd</sup> Ed; Brady 9 dult Respiratory Distress ed 1982:3:1995

CORE INDICATOR Index # RE2I	SHORTNESS OF BREATH - SIGNS & SYMPTOMS OF FLUI	D OVERLOAD
Measure	Decrease or Relief of Sympton	ns
CORE INDICATOR REF	RESPIRATORY TREATMENT PROTOCOL UTIL	IZATION
Objective	shortness of breath with fluid	o exhibit signs & symptoms of overload that show a decrease or ment by EMS personnel in the
Classification	☐ Medical care - Clinical	
Type of Measure	□ Outcome	
Domain of Performance	□ Compliance - frequency	
Indicator Reporting Value	<b>"</b> %	
Display Format	□ List □ Cube Chart □ Bar Chart □ Line Graph	
Frequency of Display	□ Monthly x 12	
Measures of Central Tendency	<ul> <li>mean - Yes</li> <li>mode - No</li> <li>variance - No</li> <li>standard deviation - Yes</li> </ul>	
Trending Analysis	□ NA	
Minimum Data Values	□ 30 values per measure	
Sampling	□ Periodic - Rate	
Aggregation	□ Yes	
Blinded	□ Yes	
Beta Testing	□ None to Date	
Population Denominator (D)	<ul> <li>patients who exhibit signs &amp; with fluid overload and are tree.</li> <li>Prehospital setting</li> </ul>	symptoms of shortness of breath eated by EMS personnel in
Denominator	Inclusion Criteria	EMSA Data Elements
	<ul> <li>patient has reached age 15</li> <li>patients who exhibit signs &amp; symptoms of shortness of breath with fluid overload</li> <li>event was in prehospital setting</li> <li>patient was treated by EMS personnel</li> <li>specified query time period match numerator</li> </ul>	<ul> <li>□ EMSA #36</li> <li>□ EMSA #54VTAC, 54VFIB</li> <li>□ EMSA #54C-A</li> <li>□ EMSA #54</li> <li>□ EMSA #52</li> </ul>

Denominator Data Source	EMS Medical Records	
Population Subset Numerator (N)	the number of patients that show decrease or relief of symptoms after treatment by EMS personnel in Prehospital setting	
Numerator	Inclusion Criteria	EMSA Data Elements
	<ul> <li>patient has reached age 15</li> <li>patients who receive oxygen</li> <li>patients who show decrease or relief of symptoms after treatment event was in prehospital setting</li> <li>patient was treated by EMS personnel</li> <li>Subset of denominator</li> <li>specified query time period match numerator</li> <li>EMS Medical Records</li> </ul>	□ EMSA#
Numerator Data Source		hu danaminatar valua (D) multipliad
Description of Indicator Formula	by 100 equals percentage (%	by denominator value (D) multiplied 6)
Indicator Formula	□ N/D=%	
Numeric Expression		
Linkage	Linkage Options	EMSA Data Elements
	□ nomo	□ EMCA #20
	□ name □ dob □ age □ gender □ admit date □ procedures	□ EMSA #29 □ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ? □ EMSA #73
Stratification	□ dob □ age □ gender □ admit date	□ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ?
Stratification	dob age gender admit date procedures  Options  by age by gender by response times by scene times by provider level	□ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ? □ EMSA #73
Stratification  Indicator Exclusion Criteria	dob age gender admit date procedures  Options  by age by gender by response times by scene times by provider level non-respiratory etiologies,	□ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ? □ EMSA #73  EMSA Data Elements □ EMSA #36 □ EMSA #38 □ EMSA #38 □ EMSA #8 □ EMSA #8
	□ dob □ age □ gender □ admit date □ procedures   Options □ by age □ by gender □ by response times □ by scene times □ by provider level □ non-respiratory etiologies, □ respiratory etiologies where personnel  • American Heart Associate Cardiac Life Support; (20) • Bledsoe B, Paramedic E Publishing. 1997; 277-27 • Hudson LD. Causes of A Syndrome, Clin Chest M	□ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ? □ EMSA #73  EMSA Data Elements □ EMSA #36 □ EMSA #38 □ EMSA #38 □ EMSA #8 □ EMSA #8 □ EMSA #8 □ EMSA #8  treatment not attempted by EMS  dion; Textbook on Advanced 2000) mergency Care; 3 <sup>rd</sup> Ed; Brady 79  dult Respiratory Distress ed 1982:3:1995
Indicator Exclusion Criteria	□ dob □ age □ gender □ admit date □ procedures   Options □ by age □ by gender □ by response times □ by scene times □ by provider level □ non-respiratory etiologies, □ respiratory etiologies where personnel  • American Heart Associate Cardiac Life Support; (20) • Bledsoe B, Paramedic E Publishing. 1997; 277-27 • Hudson LD. Causes of A	□ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ? □ EMSA #73  EMSA Data Elements □ EMSA #36 □ EMSA #38 □ EMSA #38 □ EMSA #8 □ EMSA #8 □ EMSA #8 □ EMSA #8  treatment not attempted by EMS  cion; Textbook on Advanced 000) mergency Care; 3 <sup>rd</sup> Ed; Brady 79  cidult Respiratory Distress ed 1982:3:1995
Indicator Exclusion Criteria References	dob age gender admit date procedures  Options  by age by gender by response times by scene times by provider level non-respiratory etiologies, respiratory etiologies where personnel  • American Heart Associat Cardiac Life Support; (20) • Bledsoe B, Paramedic E Publishing. 1997; 277-27 • Hudson LD. Causes of A Syndrome, Clin Chest M California EMSA Vision Project	□ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ? □ EMSA #73  EMSA Data Elements □ EMSA #36 □ EMSA #38 □ EMSA #38 □ EMSA #8 □ EMSA #8 □ EMSA #8 □ EMSA #8  treatment not attempted by EMS  cion; Textbook on Advanced 000) mergency Care; 3 <sup>rd</sup> Ed; Brady 79  cidult Respiratory Distress ed 1982:3:1995

Measure	Provider Impression Match ED	<u>Diagnosis</u>
CORE INDICATOR REF #RE1	RESPIRATORY TREATMENT PROTOCOL UTIL	IZATION
Objective		ose primary clinical impression of overload as assessed by EMS department diagnosis.
Classification	□ Medical care - Clinical	·
Type of Measure	□ Outcome	
Domain of Performance	□ Compliance - frequency	
Indicator Reporting Value	<b>"</b> %	
Display Format	<ul><li>□ List</li><li>□ Cube Chart</li><li>□ Bar Chart</li><li>□ Line Graph</li></ul>	
Frequency of Display	□ Monthly x 12	
Measures of Central Tendency	<ul> <li>mean - Yes</li> <li>mode - No</li> <li>variance - No</li> <li>standard deviation - Yes</li> </ul>	
Trending Analysis	□ NA	
Minimum Data Values	□ 30 values per measure	
Sampling	□ Periodic - Rate	
Aggregation	□ Yes	
Blinded	□ Yes	
Beta Testing	□ None to Date	
Population Denominator (D)		symptoms of shortness of breath ted as primary impression by EMS
Denominator	Inclusion Criteria	EMSA Data Elements
	<ul> <li>patient has reached age 15</li> <li>patients reported as signs &amp; symptoms of shortness of breath with fluid overload as primary impression by EMS personnel</li> <li>event was in prehospital setting</li> <li>specified query time period match numerator</li> </ul>	<ul> <li>□ EMSA #36</li> <li>□ EMSA #54VTAC, 54VFIB</li> <li>□ EMSA #54C-A</li> <li>□ EMSA #54</li> <li>□ EMSA #52</li> </ul>
Denominator Data Source	EMS Medical Records	
Population Subset Numerator (N)		d by EMS personnel where ED s of breath with fluid overload

Numerator	Inclusion Criteria	EMSA Data Elements
Numerator Data Source  Description of Indicator Formula	by 100 equals percentage (%	by denominator value (D) multiplied
Indicator Formula Numeric Expression	□ N/D = %	
Linkage	Linkage Options	EMSA Data Elements
	<ul> <li>name</li> <li>dob</li> <li>age</li> <li>gender</li> <li>admit date</li> <li>procedures</li> </ul>	□ EMSA #29 □ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ? □ EMSA #73
Stratification	Options	EMSA Data Elements
Indicator Exclusion Criteria	<ul> <li>by age</li> <li>by gender</li> <li>by response times</li> <li>by scene times</li> <li>by provider level</li> <li>by symptoms</li> <li>non-respiratory etiologies, respiratory etiologies where the personnel</li> </ul>	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8  treatment not attempted by EMS
References	poroci	
Source	<ul> <li>Cardiac Life Support; (20</li> <li>Bledsoe B, Paramedic E Publishing, 1997; 277-27</li> </ul>	mergency Care; 3 <sup>rd</sup> Ed; Brady 79 Adult Respiratory Distress ed 1982:3:1995
Source		

CORE INDICATOR Index # RE2K	SHORTNESS OF BREATH - SIGNS & SYMPTOMS OFFLUID	O OVERLOAD
Measure	Survival to Hospital Discharge	
CORE INDICATOR REF	RESPIRATORY	
#RE1	TREATMENT PROTOCOL UTIL	IZATION
Objective	shortness of breath with fluid personnel survive to hospital	ose primary clinical impression of overload as assessed by EMS discharge.
Classification	■ Medical care - Clinical	
Type of Measure	□ Outcome	
Domain of Performance	□ Effectiveness	
Indicator Reporting Value	□ %	
Display Format	□ List □ Cube Chart □ Bar Chart □ Line Graph	
Frequency of Display	☐ Monthly x 12	
Measures of Central Tendency	<ul> <li>□ mean - Yes</li> <li>□ mode - No</li> <li>□ variance - No</li> <li>□ standard deviation - Yes</li> </ul>	
Trending Analysis	□ NA	
Minimum Data Values	□ 30 values per measure	
Sampling	□ Periodic - Rate	
Aggregation	□ Yes	
Blinded	□ Yes	
Beta Testing	□ None to Date	
Population Denominator (D)		symptoms of shortness of breath ted as primary impression by EMS
Denominator	Inclusion Criteria	EMSA Data Elements
	<ul> <li>patient has reached age 15</li> <li>patients reported as signs &amp; symptoms of shortness of breath with bronchospasm as primary impression by EMS personnel</li> <li>event was in prehospital setting</li> <li>specified query time period match numerator</li> </ul>	<ul> <li>□ EMSA #36</li> <li>□ EMSA #</li> <li>□ EMSA #54C-A</li> <li>□ EMSA #54</li> <li>□ EMSA #52</li> </ul>

Denominator Data Source	EMS Medical Records	
Population Subset Numerator (N)	the number of patients treated by EMS personnel for shortness of breathe with fluid overload who were discharged alive from hospital.	
Numerator	Inclusi on Criteria	EMSA Data Elements
Numerator Data Source	<ul> <li>patient has reached age 15</li> <li>patients treated by EMS personnel</li> <li>event was in prehospital setting</li> <li>Prehospital provider Impression indicates Shortness of breath with fluid overload</li> <li>Patient discharged alive from hospital</li> <li>Subset of denominator</li> <li>Specified query time period match numerator</li> <li>Hospital Discharge Records</li> </ul>	□ EMSA#
	□ OSHPD □ EMS Medical Records □ Numerator value (N) divided	by denominator value (D) multiplied
Description of Indicator Formula	by 100 equals percentage (%	* * * * * * * * * * * * * * * * * * * *
Indicator Formula	□ N/D = %	
Numeric Expression		
Linkage	Linkage Options	EMSA Data Elements
	□ name □ dob □ age □ gender □ admit date □ procedures	<ul> <li>□ EMSA #29</li> <li>□ EMSA #35</li> <li>□ EMSA #36</li> <li>□ EMSA #38</li> <li>□ EMSA #?</li> <li>□ EMSA #73</li> </ul>
Stratification	Options	EMSA Data Elements
	□ by age	- F1404 #00
	<ul> <li>by gender</li> <li>by response times</li> <li>by scene times</li> <li>by provider level</li> <li>by symptoms</li> </ul>	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8
Indicator Exclusion Criteria	<ul> <li>by gender</li> <li>by response times</li> <li>by scene times</li> <li>by provider level</li> <li>by symptoms</li> <li>non-respiratory etiologies, respiratory etiologies where personnel</li> </ul>	□ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8  treatment not attempted by EMS
Indicator Exclusion Criteria  References  Source	<ul> <li>by gender</li> <li>by response times</li> <li>by scene times</li> <li>by provider level</li> <li>by symptoms</li> <li>non-respiratory etiologies, respiratory etiologies where personnel</li> <li>American Heart Associate Cardiac Life Support; (20)</li> <li>Bledsoe B, Paramedic E Publishing. 1997; 277-27</li> </ul>	EMSA #38 EMSA #8 EMSA #17-20 EMSA #8  treatment not attempted by EMS  ion; Textbook on Advanced 000) mergency Care; 3 <sup>rd</sup> Ed; Brady 9 dult Respiratory Distress ed 1982:3:1995

CORE INDICATOR	RECEIVING FACILITIES	
Index # RF1A		
Measure	Inter-facility Transfers	
CORE INDICATOR REF	SYSTEM OPERATIONS	
#RF1	PATIENT DESTINATION PROF	
Objective	to measure the % of patient t facilities	transfers initiate by receiving
Classification	□ System Operations – Receiv	ing Facilities
Type of Measure	<ul><li>outcome</li></ul>	
Domain of Performance	□ Volume - Frequency	
Indicator Reporting Value	□ %	
Display Format	<ul><li>□ Bar Chart</li><li>□ Line Graph</li></ul>	
Frequency of Display	□ Monthly x 12	
Measures of Central Tendency	<ul><li>□ mean - Yes</li><li>□ mode - No</li><li>□ variance - No</li><li>□ standard deviation - No</li></ul>	
Trending Analysis	□ NA	
Minimum Data Values	□ 30 values per measure	
Sampling	□ Periodic - Rate	
Aggregation	□ Yes	
Blinded	□ Yes	
Beta Testing	□ None to Date	
Population Denominator (D)	the number of EMS patients receiving facility	transported to and accepted by
Denominator	Inclusion Criteria	EMSA Data Elements
	<ul> <li>patient treated by EMS personnel</li> <li>patient was transported to and accepted by receiving facility</li> <li>specified query time match numerator</li> </ul>	<ul> <li>□ EMSA #36</li> <li>□ EMSA #54VTAC, 54VFIB</li> <li>□ EMSA #54C-A</li> <li>□ EMSA #54</li> </ul>
Denominator Data Source	<ul><li>EMS Medical Records</li><li>Hospital Discharge Records</li><li>OSHPD</li></ul>	
Population Subset Numerator (N)	□ the number of patients transf	erred out of receiving facility
Numerator	Inclusion Criteria	EMSA Data Elements

		□ discharge status (TBD)
Numerator Data Source	<ul> <li>patient treated by EMS personnel</li> <li>patient was transported to and accepted by receiving facility</li> <li>patients transferred out of receiving facility</li> <li>Subset of denominator</li> <li>specified query time match denominator</li> <li>hospital discharge records</li> <li>GSHPD discharge record</li> </ul>	hu dan arain atau value (D) multiplied
Description of Indicator Formula	by 100 equals percentage (9	by denominator value (D) multiplied %)
Indicator Formula	□ N / D = %	
Numeric Expression		
Linkage	Linkage Options	EMSA Data Elements
	□ name □ dob □ age □ gender □ admit date □ procedures	□ EMSA #29 □ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ? □ EMSA # 73
Stratification	□ dob □ age □ gender □ admit date	□ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ?
Stratification	dob age gender admit date procedures  Options  by age by gender by incident type by times by provider level	□ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ? □ EMSA #73  EMSA Data Elements □ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #8 □ EMSA #17-20
Stratification  Indicator Exclusion Criteria	dob age gender admit date procedures  Options  by age by gender by incident type by times by provider level patients not transported to o	□ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ? □ EMSA #73  EMSA Data Elements □ EMSA #36 □ EMSA #38 □ EMSA #38 □ EMSA #8 □ EMSA #17-20  r accepted by receiving facility
	dob age gender admit date procedures  Options  by age by gender by incident type by times by provider level patients not transported to opatients not treated or trans	□ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ? □ EMSA #73  EMSA Data Elements □ EMSA #36 □ EMSA #38 □ EMSA #38 □ EMSA #38 □ EMSA #8 □ EMSA #17-20  r accepted by receiving facility ported by EMS personnel lations; Title 22; Social Security EMS, 1991 restems – Medical Oversight , Physicians. Mosby 2 <sup>nd</sup> Ed. 1994

CORE INDICATOR	RECEIVING FACILITIES	
Index # RF1B		
Measure	Patient-Transport Diversions	
CORE INDICATOR REF	SYSTEM OPERATIONS	
#RF1	PATIENT DESTINATION PROF	
Objective	-	atients diverted by receiving facilities
Classification	□ System Operations – Receiv	ing Facilities
Type of Measure	outcome	
Domain of Performance	□ Volume - Frequency	
Indicator Reporting Value	<b>u</b> %	
Display Format	<ul><li>□ Bar Chart</li><li>□ Line Graph</li></ul>	
Frequency of Display	☐ Monthly x 12	
Measures of Central Tendency	<ul> <li>mean - Yes</li> <li>mode - No</li> <li>variance - No</li> <li>standard deviation - No</li> </ul>	
Trending Analysis	□ NA	
Minimum Data Values	□ 30 values per measure	
Sampling	□ Periodic - Rate	
Aggregation	□ Yes	
Blinded	□ Yes	
Beta Testing	□ None to Date	
Population Denominator (D)	the number of EMS patients facilities was initiated.	where transportation to receiving
Denominator	Inclusion Criteria	EMSA Data Elements
	<ul> <li>patient treated by EMS personnel</li> <li>patient transport was initiated in prehospital setting</li> <li>specified query time match numerator</li> </ul>	<ul> <li>□ EMSA #36</li> <li>□ EMSA #54VTAC, 54VFIB</li> <li>□ EMSA #54C-A</li> <li>□ EMSA #54</li> </ul>
Denominator Data Source	<ul><li>EMS Medical Records</li><li>Hospital Discharge Records</li><li>OSHPD</li></ul>	
Population Subset Numerator (N)	the number of EMS patients facilities was diverted to ano	where transportation to receiving ther receiving facility
Numerator	Inclusion Criteria	EMSA Data Elements

Numerator Data Source		patient treated by EMS personnel patient was diverted by receiving facility to another receiving facility Subset of denominator specified query time match denominator hospital discharge records		discharge status ( <b>TBD</b> )
		EMS medical records OSHPD discharge record	ll	(D) and the line
Description of Indicator Formula		by 100 equals percentage (%		enominator value (D) multiplied
Indicator Formula		N / D = %		
Numeric Expression				
Linkage	Lir	nkage Options	EN	ISA Data Elements
	00000	name dob age gender admit date procedures	0 0 0 0 0	EMSA #29 EMSA #35 EMSA #36 EMSA #38 EMSA # ? EMSA #73
Stratification		Options		EMSA Data Elements
	0 0 0 0 0	by age by gender by incident type by times by provider level	0000	EMSA #36 EMSA #38 EMSA #8 EMSA #17-20
Indicator Exclusion Criteria		patients not transported to or patients not treated or transp		
References	<ul> <li>California Code of Regulations; Title 22; Social Security Division 9, Prehospital EMS, 1991</li> <li>Kuehl, A; Prehospital Systems – Medical Oversight, National Assn of EMS Physicians. Mosby 2<sup>nd</sup> Ed. 1994</li> </ul>			
Source		California EMSA Vision Proje	ect	

CORE INDICATOR Index # RF1C	RECEIVING FACILITIES		
Measure	Lapse Transport Time - Patient Diversion		
CORE INDICATOR REF #RF1	SYSTEM OPERATIONS PATIENT DESTINATION PROFILES		
Objective	to measure the average lapse time of EMS patient transportation when a patient is diverted from a receiving facility to another receiving facility.		
Classification	□ System Operations – Receiv	ing Facilities	
Type of Measure	□ Process		
Domain of Performance	□ Volume - Frequency		
Indicator Reporting Value	<b>□</b> %		
Display Format	<ul><li>Bar Chart</li><li>Line Graph</li></ul>		
Frequency of Display	□ Monthly x 12		
Measures of Central Tendency	<ul> <li>mean - Yes</li> <li>mode - Yes</li> <li>variance - Yes</li> <li>standard deviation - No</li> </ul>		
Trending Analysis	□ NA		
Minimum Data Values	□ 30 values per measure		
Sampling	□ Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes	□ Yes	
Beta Testing	□ None to Date		
Population Denominator (D)	the number of EMS patients facilities was diverted to ano	where transportation to receiving ther receiving facility.	
Denominator	Inclusion Criteria	EMSA Data Elements	
	<ul> <li>patient treated by EMS personnel</li> <li>patient diversion was initiated in prehospital setting</li> <li>specified query time match numerator</li> </ul>	□ EMSA #36 □ EMSA #54 □ EMSA #54C-A □ EMSA #54	
Denominator Data Source	<ul><li>EMS Medical Records</li><li>Hospital Discharge Records</li><li>OSHPD</li></ul>		
Population Subset Numerator (N)	the cumulative lapse transport times of EMS patients where transportation to receiving facilities was diverted to another receiving facility		
Numerator	Inclusion Criteria	EMSA Data Elements	

Numerator Data Source		patient treated by EMS personnel transport time from beginning of enroute to arrival at receiving facility patient was diverted by receiving facility to another receiving facility Subset of denominator specified query time match denominator hospital discharge records		EMSA#
		EMS medical records OSHPD discharge record		
Description of Indicator Formula		numerator value (N) divided by 100 equals percentage (%		lenominator value (D) multiplied
Indicator Formula		N / D = %		
Numeric Expression				
Linkage	Lir	nkage Options	EN	ISA Data Elements
		name dob age gender admit date procedures		EMSA #29 EMSA #35 EMSA #36 EMSA #38 EMSA # ? EMSA #73
Stratification		Options		EMSA Data Elements
	000	by age by gender by incident type		EMSA #36 EMSA #38 EMSA #8
		by times by provider level		EMSA #17-20
Indicator Exclusion Criteria		by provider level patients not transported to or	acc	cepted by receiving facility
Indicator Exclusion Criteria References	<u> </u>	patients not transported to or patients not treated or transp California Code of Regul Division 9, Prehospital E Kuehl, A; Prehospital Sy	acconte ation MS,	cepted by receiving facility d by EMS personnel ns; Title 22; Social Security , 1991

CORE INDICATOR Index # RF1D	RECEIVING FACILITIES		
Measure	% Interfacility Transfers due to Costs		
CORE INDICATOR REF	SYSTEM OPERATIONS	u 50	
#RF1	PATIENT DESTINATION PROF  □ to measure the average num	ber of patients transferred due to	
Objective	financial reasons.	·	
Classification	□ System Operations – Receiv	ing Facilities	
Type of Measure	□ Process		
Domain of Performance	□ Volume - Frequency		
Indicator Reporting Value	□ %		
Display Format	□ Cube Chart □ Bar Chart		
	□ Line Graph		
Frequency of Display	☐ Monthly x 12		
Measures of Central	<ul><li>□ mean - Yes</li><li>□ mode - Yes</li></ul>		
Tendency	<ul><li>variance - Yes</li><li>standard deviation - No</li></ul>		
Trending Analysis	□ standard deviation - No □ NA		
Minimum Data Values	□ 30 values per measure		
Sampling	□ Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)	□ the number of EMS patients	transferred from receiving facilities.	
Denominator	Inclusion Criteria	EMSA Data Elements	
	<ul><li>patient treated by EMS personnel</li></ul>	□ EMSA #36	
	<ul><li>patient transferred from</li></ul>	□ EMSA #54	
	one facility to another  specified query time match	□ EMSA #54 □ EMSA #54C-A	
	numerator		
		□ EMSA #54	
Denominator Data Source	□ EMS Medical Records	ı <del>-</del>	
	<ul><li>Hospital Discharge Records</li><li>OSHPD</li></ul>		
Population Subset Numerator (N)	<ul><li>patients transferred for unknown</li></ul>	own financial reasons	

Numerator	Inclusion Criteria	EMSA Data Elements
	<ul> <li>patient treated by EMS personnel</li> <li>patient transferred from one facility to another for unknown financial reasons</li> <li>Subset of denominator</li> <li>specified query time match numerator specified query time match denominator</li> </ul>	□ EMSA#
Numerator Data Source	<ul><li>hospital discharge records</li><li>EMS medical records</li><li>OSHPD discharge record</li></ul>	
Description of Indicator Formula	by 100 equals percentage (%	by denominator value (D) multiplied 6)
Indicator Formula	□ N/D = %	
Numeric Expression		
Linkage	Linkage Options	EMSA Data Elements
	<ul> <li>name</li> <li>dob</li> <li>age</li> <li>gender</li> <li>admit date</li> <li>procedures</li> </ul>	<ul> <li>□ EMSA #29</li> <li>□ EMSA #35</li> <li>□ EMSA #36</li> <li>□ EMSA #38</li> <li>□ EMSA # ?</li> <li>□ EMSA #73</li> </ul>
Stratification	Options	EMSA Data Elements
	<ul> <li>by age</li> <li>by gender</li> <li>by incident type</li> <li>by times</li> <li>by provider level</li> </ul>	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20
Indicator Exclusion Criteria	<ul><li>patients not transported to or</li><li>patients not treated or transp</li></ul>	r accepted by receiving facility ported by EMS personnel
References	<ul> <li>California Code of Regul Division 9, Prehospital E</li> <li>Kuehl, A; Prehospital Sy National Assn of EMS Pl</li> </ul>	ations; Title 22; Social Security EMS, 1991 stems – Medical Oversight , hysicians. Mosby 2 <sup>nd</sup> Ed. 1994
Source	□ California EMSA Vision Proje	ect

CORE INDICATOR Index # RF1E	RECEIVING FACILITIES	
Measure	% Interfacility Transfers due to Higher Level Care	
measure	70 Interracinty Transfers due to Higher Level Care	
CORE INDICATOR REF	SYSTEM OPERATIONS	
#RF1	PATIENT DESTINATION PROF	_
Objective	need for higher level of care.	ber of patients transferred due to
Classification	□ System Operations – Receiv	ing Facilities
Type of Measure	□ Process	
Domain of Performance	□ Volume - Frequency	
Indicator Reporting Value	□ %	
Display Format	<ul><li>□ Cube Chart</li><li>□ Bar Chart</li></ul>	
	☐ Line Graph☐ Monthly x 12	
Frequency of Display	•	
Measures of Central	□ mean - Yes □ mode - Yes	
Tendency	□ variance - Yes	
Tranding Analysis	<ul><li>□ standard deviation - No</li><li>□ NA</li></ul>	
Trending Analysis	☐ 30 values per measure	
Minimum Data Values	□ Periodic - Rate	
Sampling		
Aggregation		
Blinded	□ Yes	
Beta Testing	□ None to Date	
Population Denominator (D)	□ the number of EMS patients	transferred from receiving facilities.
Denominator	Inclusion Criteria	EMSA Data Elements
	<ul><li>patient treated by EMS personnel</li></ul>	□ EMSA #36
	<ul><li>patient transferred from</li></ul>	□ EMSA #54
	one facility to another  specified query time match	□ EMSA #54 □ EMSA #54C-A
	numerator	
		□ EMSA #54
Denominator Data Source	□ EMS Medical Records	
	<ul><li>Hospital Discharge Records</li><li>OSHPD</li></ul>	
Population Subset	<ul><li>patients transferred for need</li></ul>	of a higher level of medical care

Numerator (N)		
Numerator	Inclusion Criteria	EMSA Data Elements
	<ul> <li>patient treated by EMS personnel</li> <li>patient transferred from one facility to another for higher level of care</li> <li>Subset of denominator</li> <li>specified query time match numerator specified query time match denominator</li> </ul>	□ EMSA#
Numerator Data Source	<ul><li>hospital discharge records</li><li>EMS medical records</li><li>OSHPD discharge record</li></ul>	
Description of Indicator Formula	by 100 equals percentage (%	by denominator value (D) multiplied
Indicator Formula	□ N/D=%	
Numeric Expression		
Linkage	Linkage Options	EMSA Data Elements
	□ name □ dob □ age □ gender □ admit date □ procedures	□ EMSA #29 □ EMSA #35 □ EMSA #36 □ EMSA #38 □ EMSA # ? □ EMSA #73
Stratification	Options	EMSA Data Elements
	<ul> <li>by age</li> <li>by gender</li> <li>by incident type</li> <li>by times</li> <li>by provider level</li> </ul>	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20
Indicator Exclusion Criteria	<ul><li>patients not transported to or</li><li>patients not treated or transp</li></ul>	accepted by receiving facility orted by EMS personnel
References	<ul> <li>California Code of Regulations; Title 22; Social Security Division 9, Prehospital EMS, 1991</li> <li>Kuehl, A; Prehospital Systems – Medical Oversight, National Assn of EMS Physicians. Mosby 2<sup>nd</sup> Ed. 1994</li> </ul>	
Source	☐ California EMSA Vision Proje	ect

CORE INDICATOR	RESPONSE		
Index # RS1A			
Measure	Queue Time of Responding Unit		
CORE INDICATOR REF	SYSTEM OPERATIONS		
#RS1	RESPONSE		
Objective	□ to measure average lapse Qu	ueue time of responding EMS units	
Classification	□ system ops - response		
Type of Measure	process		
Domain of Performance	□ efficiency		
Indicator Reporting Value	<b>.</b> %		
Display Format	☐ List☐ Cube Chart☐ Bar Chart☐ Line Graph☐ Process Control Chart		
Frequency of Display	☐ Monthly x 12		
Measures of Central Tendency	<ul> <li>mean - Yes</li> <li>mode - No</li> <li>variance - No</li> <li>standard deviation - Yes</li> </ul>		
Trending Analysis	□ NA		
Minimum Data Values	□ 30 values per measure		
Sampling	□ Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)	□ the number of EMS responses		
Denominator	Inclusion Criteria	EMSA Data Elements	
	<ul> <li>EMS unit dispatched</li> <li>EMS unit acknowledged</li> <li>EMS unit responds enroute</li> <li>Queue time from call effect (notification from dispatch) to enroute (Wheels rolling)</li> <li>specified query time period match numerator</li> </ul>	□ EMSA #36 □ EMSA # □ EMSA #54C-A □ EMSA #54	

Denominator Data Source	<ul><li>EMS Medical Records</li><li>PSAP</li></ul>	
	□ EMS Dispatch Agencies	
Population Subset Numerator (N)	the cumulative time of all lag	osed Queue times for all EMS events
Numerator	Inclusion Criteria	EMSA Data Elements
	<ul> <li>□ lapse Queue time from call effect (notification from dispatch) to enroute (wheels rolling)</li> <li>□ subset of denominator</li> <li>□ specified query time period match denominator</li> </ul>	□ discharge status ( <b>TBD)</b>
Numerator Data Source	<ul><li>EMS Medical Records</li><li>PSAP</li><li>EMS Dispatch Agencies</li></ul>	
Description of Indicator Formula	<ul><li>numerator value (N) divided average time in mins + secs</li></ul>	by denominator value (D) equals
Indicator Formula	■ N / D = ave time	
Numeric Expression		
	Linkage Options	EMSA Data Elements
Numeric Expression	□ Provider	□ EMSA #29
Numeric Expression	□ Provider □ PSAP	□ EMSA #29 □ EMSA #35
Numeric Expression	□ Provider	□ EMSA #29
Numeric Expression  Linka ge	□ Provider □ PSAP □ Time of call	□ EMSA #29 □ EMSA #35 □ EMSA #36
Numeric Expression  Linka ge	□ Provider □ PSAP □ Time of call  Options □ by provider □ by PSAP □ by time of call □ by response times □ by scene times	□ EMSA #29 □ EMSA #35 □ EMSA #36  EMSA Data Elements □ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #8 □ EMSA #17-20 □ EMSA #8
Numeric Expression  Linkage  Stratification	□ Provider □ PSAP □ Time of call  Options □ by provider □ by PSAP □ by time of call □ by response times □ by scene times □ by type of call □ Queue times where units did  • Cadigan R, Predicting Despendent of Emerg M	□ EMSA #29 □ EMSA #35 □ EMSA #36 ■ EMSA #36 ■ EMSA #36 □ EMSA #38 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8 ■ Inot go enroute  Emand for Emergency Ambulance Med; 18:618-621, 1989 Stems – Medical Oversight , National Mosby 2 <sup>nd</sup> Ed. 1994

CORE INDICATOR Index # RS1B	RESPONSE - METRO	
Measure	% Roll Time > 10 Mins	
CORE INDICATOR REF	SYSTEM OPERATIONS	
#RS1	RESPONSE	
Objective	to measure the % of times w greater than ten (10) mins	here EMS unit rolls times are
Classification	□ system ops - response	
Type of Measure	process	
Domain of Performance	efficiency	
Indicator Reporting Value	<b>"</b> %	
Display Format	□ List □ Cube Chart □ Bar Chart □ Line Graph □ Process Control Chart	
Frequency of Display	☐ Monthly x 12	
Measures of Central Tendency	<ul> <li>mean - Yes</li> <li>mode - No</li> <li>variance - No</li> <li>standard deviation - Yes</li> </ul>	
Trending Analysis	□ NA	
Minimum Data Values	□ 30 values per measure	
Sampling	□ Periodic - Rate	
Aggregation	□ Yes	
Blinded	□ Yes	
Beta Testing	□ None to Date	
Population Denominator (D)	□ the number of EMS response:	S
Denominator	Inclusion Criteria	EMSA Data Elements
		The state of the s
	<ul><li>total number of EMS unit enroute response</li><li>specified query time period match numerator</li></ul>	□ EMSA #36 □ EMSA # □ EMSA #54C-A □ EMSA #54
Denominator Data Source	<ul><li>EMS Medical Records</li><li>PSAP</li><li>EMS Dispatch Agencies</li></ul>	
Population Subset	☐ the number of calls where ro	Il time is greater than ten (10)

Numerator (N)	minutes	
Numerator	Inclusion Criteria	EMSA Data Elements
	□ Total of all lapse roll timer from enroute (wheels rolling) to on scene (wheels stop) □ subset of denominator □ specified query time period match denominator	□ EMSA#
Numerator Data Source	<ul><li>EMS Medical Records</li><li>PSAP</li><li>EMS Dispatch Agencies</li></ul>	
Description of Indicator Formula	percentage over ten (10) mir	by denominator value (D) equals
Indicator Formula Numeric Expression	□ N / D = %	
Linkage	Linkage Options	EMSA Data Elements
	<ul><li>□ Provider</li><li>□ PSAP</li><li>□ Time of call</li></ul>	□ EMSA #29 □ EMSA #35 □ EMSA #36
Stratification	Options	EMSA Data Elements
	<ul> <li>by provider</li> <li>by PSAP</li> <li>by time of call</li> <li>by response times</li> <li>by scene times</li> <li>by type of call</li> </ul>	□ EMSA #36 □ EMSA #38 □ EMSA #8 □ EMSA #17-20 □ EMSA #8
Indicator Exclusion Criteria	<ul><li>Roll times where units not re</li><li>Units not responding with lig</li></ul>	sponding to official EMS dispatch hts and sirens.
References	<ul> <li>Cadigan R, Predicting De Service, Ann of Emerg M</li> </ul>	emand for Emergency Ambulance ed; 18:618-621, 1989 stems – Medical Oversight, National
Source	☐ California EMSA Vision Project	ct

CORE INDICATOR	RESPONSE - RURAL
Index # RS1B	
Measure	% Roll Time > 20 Mins
CORE INDICATOR REF	SYSTEM OPERATIONS
#RS1	RESPONSE

Objective	to measure the % of times where EMS unit rolls times are greater than twenty (20) mins			
Classification	□ system ops - response			
Type of Measure	process			
Domain of Performance	□ efficiency			
Indicator Reporting Value	<b>u</b> %			
Display Format	□ List □ Cube Chart □ Bar Chart □ Line Graph □ Process Control Chart			
Frequency of Display	☐ Monthly x 12			
Measures of Central Tendency	<ul><li>□ mean - Yes</li><li>□ mode - No</li><li>□ variance - No</li><li>□ standard deviation - Yes</li></ul>			
Trending Analysis	□ NA			
Minimum Data Values	□ 30 values per measure			
Sampling	□ Periodic - Rate			
Aggregation	□ Yes			
Blinded	□ Yes			
Beta Testing	□ None to Date			
Population Denominator (D)	□ the number of EMS responses			
Denominator	Inclusion Criteria EMSA Data Elements			
	□ totall number of EMS unit enroute responses □ EMSA # 36 □ specified query time period match numerator □ EMSA # 54C-A □ EMSA # 54			
Denominator Data Source	<ul><li>□ EMS Medical Records</li><li>□ PSAP</li><li>□ EMS Dispatch Agencies</li></ul>			
Population Subset Numerator (N)	<ul><li>the number of calls where rominutes</li></ul>	oll time is greater than twenty (20)		
Numerator	Inclusion Criteria	EMSA Data Elements		
	□ Total of all lapse time from enroute (wheels rolling) to on scene (wheels stop) □ subset of denominator □ specified query time period match denominator	□ EMSA#		

Numerator Data Source	<ul><li>□ EMS Medical Records</li><li>□ PSAP</li></ul>					
		□ EMS Dispatch Agencies				
Description of Indicator						
Formula		percentage over twenty (20)	) mii	ns		
Indicator Formula		N / D = %				
Numeric Expression						
Linkage	Lir	Linkage Options EMSA Data Elements				
		Provider		EMSA #29		
		PSAP		EMSA #35		
		Time of call		EMSA #36		
Stratification		Options		EMSA Data Elements		
		by provider		EMSA #36		
		by PSAP		EMSA #38		
		by time of call		EMSA #8		
		by response times		EMSA #17-20		
		by scene times		EMSA #8		
		by type of call				
Indicator Exclusion Criteria	□ Roll times where units not responding to official EMS dispatch					
marcater Exercises of Criteria		Units not responding with lig				
References				nd for Emergency Ambulance		
110101011000		Service, Ann of Emerg M				
				s – Medical Oversight , National		
		Assn of EMS Physicians.		by 2 <sup>na</sup> Ed. 1994		
Source		California EMSA Vision Projec	t			

CORE INDICATOR Index # SK1A	ADVANCED PROVIDER SKILLS					
Measure		% Insertion rate Endotracheal Intubation - Adult				
CORE INDICATOR REF #SK1	CL	CLINICAL SKILLS UTILIZATION				
Objective		to measure % insertion rate p		•		
Classification		endotracheal intubation for E medical care - clinical	IVIS	personner.		
Type of Measure		Process				
Domain of Performance		Psychomotor skills				
Indicator Reporting Value		%				
Display Format		Table				
Display I office		Cube Chart				
		Bar Chart				
		Line Graph				
		Process Control Chart				
Frequency of Display		Monthly x 12				
Measures of Central		mean - Yes				
Tendency		mode - No				
		variance - No				
		standard deviation - Yes				
Trending Analysis		NA				
Minimum Data Values		30 values per measure				
Sampling		Periodic - Rate				
Aggregation		Yes				
Blinded		Yes Name to Date				
Beta Testing		None to Date	4			
Population Denominator (D)	כ	the number of attempt s at insertion of a endotracheal tube - Adult				
Denominator	Inc	clusion Criteria	EN	ISA Data Elements		
		patient has reached age 15		EMSA #36		
		Attempt is the				
		laryngoscopy and passing		EMSA #54VTAC, 54VFIB		
		of a ET tube beyond the		EMSA #54C-A		
		teeth with intent of placing		EMSA #54		
		an endotracheal tube event was in prehospital		EMSA #54		
	_	setting		EMSA #52		
		specified query time period	_	LIVIO/ ( II OZ		
		same period as numerator				
Denominator Data Source		EMS Medical Records				
Population Subset	☐ the number of patients whom an endotracheal tube is inserted.					
Numerator (N) Numerator	Inclusion Criteria					
Numerator		Inclusion Criteria EMSA Data Elements  Display to the company of t				
		patient has reached age 15 insertion is passing of an		discharge status (TBD)		
	_	ET tube into the trachea				
		with confirmation by				
		presence of bilateral breath				
		sounds in lungs on				
		auscultation and absence				
		of air in stomach on				
		auscultation.				
		event was in prehospital				
		setting				

		subset of denominator		
		specified query time period		
		same period as		
		denominator		
Numerator Data Source		EMS Medical Records		
		ED Chart		
Description of Indicator		` ,	•	enominator value (D) multiplied
Formula		by 100 equals percentage (%	5)	
Indicator Formula		N / D = %		
Numeric Expression				
Linkage	Lir	nkage Options	EM	SA Data Elements
		name		EMSA #29
		dob		EMSA #35
		age		EMSA #36
		gender		EMSA #38
		admit date		EMSA # ?
		procedures		EMSA #73
Stratification		Options		EMSA Data Elements
		by age		EMSA #36
		by gender		EMSA #38
		by incident type		EMSA #8
		by provider level		EMSA #17-20
Indicator Exclusion Criteria		nasal intubations		
		pediatric intubations		
References		American Heart Associat	ion.	Textbook on Advanced
		Cardiac Life Support, (20		
		• • • • •	,	s Title 22, Social Security
		Division 9, Prehospital E		
		O'Connor, R MD; ET Fie		
				saster Medicine: 1995, Vol 10
		No 4, (Sup S23)		
			men	t Study. 1997 LA County EMS
		Services		a Stady. 1007 Ex County EIVIO
		<ul> <li>Skelton MB, McSwain NB</li> </ul>	- ^	study of Cognitive and
				Among Trained paramedics.
		JACEP 1997;6: 436-438		Among Trained paramedics.
				y of Mannequin and Human
		Subjects for Endotrachea		
				le; 1991, Vol 20 p 1314-1318
Cauras				E, 1331, VOI 20 P 1314-1318
Source		California EMSA Vision Proje	UL	

CORE INDICATOR Index # SK1B	ADVANCED PROVIDER SKILLS				
Measure	Frequency of Skill Performance Endotracheal Intubation - Adult				
CORE INDICATOR REF	CLINICAL				
#SK1	SKILLS UTILIZATION				
Objective	to measure frequency of oral licensed EMT-P personnel.	ET performed per year per			
Classification	□ medical care - clinical				
Type of Measure	□ Process				
Domain of Performance	□ Frequency				
Indicator Reporting Value	□ Number per licensed EMT-P				
Display Format	□ Table □ Cube Chart □ Bar Chart □ Line Graph				
Frequency of Display	□ Monthly x 12				
Measures of Central Tendency	<ul> <li>□ mean - Yes</li> <li>□ mode - No</li> <li>□ variance - No</li> <li>□ standard deviation - Yes</li> </ul>				
Trending Analysis	□ NA				
Minimum Data Values	□ 30 values per measure				
Sampling	□ Periodic - Rate				
Aggregation	□ Yes				
Blinded	□ Yes				
Beta Testing	□ None to Date				
Population Denominator (D)	□ the number of licensed EMT	F-P personnel in California			
Denominator	Inclusion Criteria	EMSA Data Elements			
Donominator Data Sauras	□ EMT-Paramedics □ Currently licensed in state California □ specified query time period same period as numerator □ LEMSA	□ EMSA #36 □ EMSA # □ EMSA #			
Denominator Data Source	□ EMSA				

Population Subset Numerator (N)	□ the number of oral ET insertions			
Numerator	Inclusion Criteria	EMSA Data Elements		
Numerator Data Source  Description of Indicator Formula	<ul> <li>patient has reached age 15 insertion is passing of an ET tube into the trachea with confirmation by presence of bilateral breath sounds in lungs on auscultation and absence of air in stomach on auscultation.</li> <li>event was in prehospital setting</li> <li>subset of denominator</li> <li>specified query time period same period as denominator</li> <li>EMS Medical Records</li> <li>ED Chart</li> <li>numerator value (N) divided to number of insertions per licer</li> </ul>	by denominator value (D) equals		
Indicator Formula Numeric Expression	□ N / D = Number of ET insertions per licensed personnel			
Linkage	Linkage Options	EMSA Data Elements		
	□ procedures	□ EMSA #29 □ EMSA #35		
Stratification	Options	EMSA Data Elements		
	□ by incident type □ by provider level	□ EMSA #36 □ EMSA #3820		
Indicator Exclusion Criteria	<ul><li>nasal intubations</li><li>pediatric intubations</li></ul>			
References	<ul> <li>pediatric intubations</li> <li>American Heart Associati Cardiac Life Support, (20)</li> <li>California Code of Regula Division 9, Prehospital EI</li> <li>O'Connor, R MD; ET Fiel Proficiency, Prehospital 8 No 4, (Sup S23)</li> <li>Pediatric Airway Manage Services</li> <li>Skelton MB, McSwain NE Technical Skills Deteriora JACEP 1997;6: 436-438</li> <li>Stratton S., Prospective Subjects for Endotrachea</li> </ul>	ations Title 22, Social Security MS 1991 Id experience; Paramedics to & Disaster Medicine: 1995, Vol 10  ement Study. 1997 LA County EMS  E. A study of Cognitive and ation Among Trained paramedics.  Study of Mannequin and Human al Intubation training for erg Me; 1991, Vol 20 p 1314-1318		
	<ul> <li>pediatric intubations</li> <li>American Heart Associati Cardiac Life Support, (20)</li> <li>California Code of Regula Division 9, Prehospital Ell</li> <li>O'Connor, R MD; ET Fiel Proficiency, Prehospital &amp; No 4, (Sup S23)</li> <li>Pediatric Airway Manage Services</li> <li>Skelton MB, McSwain NE Technical Skills Deteriora JACEP 1997;6: 436-438</li> <li>Stratton S., Prospective &amp; Subjects for Endotrachea Paramedics, Ann of Eme</li> </ul>	ations Title 22, Social Security MS 1991 Id experience; Paramedics to & Disaster Medicine: 1995, Vol 10  ement Study. 1997 LA County EMS  E. A study of Cognitive and ation Among Trained paramedics.  Study of Mannequin and Human al Intubation training for erg Me; 1991, Vol 20 p 1314-1318 ect		

Index # SK1C						
Measure	<u>% l</u>	Insertion Rate Nasal Endotrache	al I	ntubation - Adult		
CORE INDICATOR REF		INICAL				
#SK1	SK	SKILLS UTILIZATION				
Objective		to measure % insertion rate pendotracheal intubation for E				
Classification		medical care - clinical				
Type of Measure		Process				
Domain of Performance		Psychomotor skills				
Indicator Reporting Value Display Format		% Table				
Display Format		Cube Chart				
		Bar Chart				
		Line Graph				
		Process Control Chart				
Frequency of Display		Monthly x 12				
Measures of Central		mean - Yes				
Tendency		mode - No				
		variance - No				
Trending Analysis		standard deviation - Yes NA				
Minimum Data Values		30 values per measure				
Sampling		Periodic - Rate				
Aggregation		Yes				
Blinded		Yes				
Beta Testing		None to Date				
Population Denominator (D)	the number of attempt s at nasal insertion of a endotracheal					
		tube - Adult				
	Inclusion Criteria EMSA Data Elements					
Denominator	Inc	lusion Criteria	EM	ISA Data Elements		
Denominator	Inc	patient has reached age 15		EMSA #36		
Denominator		patient has reached age 15 Attempt is the passing of a		EMSA #36		
Denominator		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares				
Denominator		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an		EMSA #36 EMSA #		
Denominator	0	patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube		EMSA #36		
Denominator		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an		EMSA #36 EMSA #		
Denominator	0	patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator		EMSA #36 EMSA # EMSA #54C-A		
Denominator		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period		EMSA #36 EMSA # EMSA #54C-A		
		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period same period as numerator		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54		
Denominator  Denominator Data Source		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54		
		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period same period as numerator		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54		
		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period same period as numerator		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52		
Denominator Data Source		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period same period as numerator EMS Medical Records		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52		
Denominator Data Source Population Subset		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  asal endotracheal tube is		
Denominator Data Source Population Subset Numerator (N)		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.  Elusion Criteria patient has reached age 15		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  asal endotracheal tube is		
Denominator Data Source Population Subset Numerator (N)		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.  clusion Criteria patient has reached age 15 insertion is passing of an		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  asal endotracheal tube is		
Denominator Data Source Population Subset Numerator (N)		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.  Lusion Criteria patient has reached age 15 insertion is passing of an ET tube into the trachea		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  asal endotracheal tube is		
Denominator Data Source Population Subset Numerator (N)		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.  lusion Criteria patient has reached age 15 insertion is passing of an ET tube into the trachea with confirmation by		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  asal endotracheal tube is		
Denominator Data Source Population Subset Numerator (N)		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.  Lusion Criteria patient has reached age 15 insertion is passing of an ET tube into the trachea		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  asal endotracheal tube is		
Denominator Data Source Population Subset Numerator (N)		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.  Lusion Criteria patient has reached age 15 insertion is passing of an ET tube into the trachea with confirmation by presence of bilateral breath		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  asal endotracheal tube is		
Denominator Data Source Population Subset Numerator (N)		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.  Iusion Criteria  patient has reached age 15 insertion is passing of an ET tube into the trachea with confirmation by presence of bilateral breath sounds in lungs on auscultation and absence of air in stomach on		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  asal endotracheal tube is		
Denominator Data Source Population Subset Numerator (N)		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.  Lusion Criteria  patient has reached age 15 insertion is passing of an ET tube into the trachea with confirmation by presence of bilateral breath sounds in lungs on auscultation and absence of air in stomach on auscultation.		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  asal endotracheal tube is		
Denominator Data Source Population Subset Numerator (N)		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.  Iusion Criteria  patient has reached age 15 insertion is passing of an ET tube into the trachea with confirmation by presence of bilateral breath sounds in lungs on auscultation and absence of air in stomach on auscultation. event was in prehospital		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  asal endotracheal tube is		
Denominator Data Source Population Subset Numerator (N)		patient has reached age 15 Attempt is the passing of a ET tube beyond the nares with intent of placing an endotracheal tube event was in prehospital setting subset of denominator specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.  Lusion Criteria  patient has reached age 15 insertion is passing of an ET tube into the trachea with confirmation by presence of bilateral breath sounds in lungs on auscultation and absence of air in stomach on auscultation.		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  asal endotracheal tube is		

		specified query time period same period as denominator		
Numerator Data Source		EMS Medical Records ED Chart		
Description of Indicator Formula		by 100 equals percentage (%		enominator value (D) multiplied
Indicator Formula Numeric Expression		N / D = %		
Linkage	Lir	nkage Options	EM	SA Data Elements
	00000	name dob age gender admit date procedures		EMSA #29 EMSA #35 EMSA #36 EMSA #38 EMSA # ? EMSA #73
Stratification		Options		EMSA Data Elements
		by age by gender by incident type by provider level		EMSA #36 EMSA #38 EMSA #8 EMSA #17-20
Indicator Exclusion Criteria		oral intubations pediatric intubations		
References		<ul> <li>Division 9, Prehospital E</li> <li>O'Connor, R MD; ET Fie Proficiency, Prehospital 8 No 4, (Sup S23)</li> <li>Pediatric Airway Manage Services</li> <li>Skelton MB, McSwain NB Technical Skills Deteriors JACEP 1997;6: 436-438</li> <li>Stratton S., Prospective Subjects for Endotraches</li> </ul>	ation MS 1 Id ex Los men E. As ation	as Title 22, Social Security 1991 Experience; Paramedics to easter Medicine: 1995, Vol 10 It Study. 1997 LA County EMS Study of Cognitive and Among Trained paramedics.  It of Mannequin and Human
Source		California EMSA Vision Proje	ct	

CORE INDICATOR	ADVANCED PROVIDER SKILLS					
Index # SK1D						
Measure	Frequency of Skill Performance					
	Nasal Endotracheal Intubation - Adult					
CORE INDICATOR REF	CLINICAL					
#SK1	SKILLS UTILIZATION					
Objective	licensed EMT-P personnel.	al ET performed per year per				
Classification	□ medical care - clinical					
Type of Measure	□ Process					
Domain of Performance	□ Frequency					
Indicator Reporting Value	□ Number per licensed EMT-P					
Display Format	□ Table □ Cube Chart					
	□ Bar Chart					
Frequency of Display	□ Line Graph □ Monthly x 12					
Measures of Central	□ mean - Yes					
Tendency	□ mode - No					
	□ variance - No □ standard deviation - Yes					
Trending Analysis	□ NA					
Minimum Data Values	□ 30 values per measure					
Sampling	□ Periodic - Rate					
Aggregation	□ Yes					
Blinded	□ Yes					
Beta Testing	□ None to Date					
Population Denominator (D)	□ the number of licensed EMT	T-P personnel in California				
Denominator	Inclusion Criteria	EMSA Data Elements				
	<ul><li>EMT-Paramedics</li><li>Currently licensed in state</li><li>California</li></ul>	□ EMSA #36				
	specified query time period same period as numerator	□ EMSA#				
Denominator Data Source	□ LEMSA □ EMSA					

Population Subset Numerator (N)	□ the number of nasal ET insertions			
Numerator	Inclusion Criteria	EMSA Data Elements		
	<ul> <li>patient has reached age 15 insertion is passing of a nasal ET tube into the trachea with confirmation by presence of bilateral breath sounds in lungs on auscultation and absence of air in stomach on auscultation.</li> <li>event was in prehospital setting</li> <li>subset of denominator</li> <li>specified query time period same period as denominator</li> </ul>			
Numerator Data Source	<ul><li>EMS Medical Records</li><li>ED Chart</li></ul>			
Description of Indicator Formula	numerator value (N) divided by denominator value (D) equals number of nasal ET insertions per licensed personnel			
Indicator Formula	□ N / D = Number of nasal ET insertions per licensed personnel			
Numeric Expression				
Linkage	Linkage Options	EMSA Data Elements		
	□ procedures	□ EMSA #29 □ EMSA #35		
Stratification	Options	EMSA Data Elements		
	<ul><li>by incident type</li><li>by provider level</li></ul>	□ EMSA #36 □ EMSA #3820		
Indicator Exclusion Criteria	<ul><li>oral intubations</li><li>pediatric intubations</li></ul>			
References	<ul> <li>pediatric intubations</li> <li>American Heart Association, Textbook on Advanced Cardiac Life Support, (2000)</li> <li>California Code of Regulations Title 22, Social Security Division 9, Prehospital EMS 1991</li> <li>O'Connor, R MD; ET Field experience; Paramedics to Proficiency, Prehospital &amp; Disaster Medicine: 1995, Vol 10 No 4, (Sup S23)</li> </ul>			
Source	<ul> <li>Services</li> <li>Skelton MB, McSwain NI Technical Skills Deteriora JACEP 1997;6: 436-438</li> <li>Stratton S., Prospective Subjects for Endotrachea</li> </ul>	rg Me; 1991, Vol 20 p 1314-1318		

CORE INDICATOR Index # SK1E	AD	ADVANCED PROVIDER SKILLS					
Measure		% Insertion Rate Pediatric Endotracheal Intubation					
			rac	cheal intubation			
CORE INDICATOR REF	_	INICAL					
#SK1		ILLS UTILIZATION		atal attamata at padiatria			
Objective		to measure % insertion rate   endotracheal intubation for E					
Classification		medical care - clinical		percernien			
Type of Measure		Process					
Domain of Performance		Psychomotor skills					
Indicator Reporting Value		%					
Display Format		Table					
		Cube Chart					
		Bar Chart					
		Line Graph Process Control Chart					
Frequency of Display		Monthly x 12					
Measures of Central		mean - Yes					
Tendency		mode - No					
		variance - No					
		standard deviation - Yes					
Trending Analysis		NA					
Minimum Data Values		30 values per measure					
Sampling		Periodic - Rate					
Aggregation		Yes					
Blinded		Yes None to Date					
Beta Testing Population Denominator (D)		None to Date	odio	atric and atrached intubation			
	□ the number of attempt s at pediatric endotracheal intubation  Inclusion Criteria EMSA Data Elements						
Denominator	Inc	dusion Criteria	IFN	ISA Data Flements			
Denominator	Inc	clusion Criteria	EN	ISA Data Elements			
Denominator	Inc	patient has not reached		EMSA #36			
Denominator		patient has not reached age 15		EMSA #36			
Denominator		patient has not reached					
Denominator		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or		EMSA #36			
Denominator		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with		EMSA #36 EMSA # EMSA #54C-A			
Denominator		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or		EMSA #36 EMSA #			
Denominator		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with intent of placing an		EMSA #36 EMSA # EMSA #54C-A			
Denominator		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with intent of placing an endotracheal tube event was in prehospital setting		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54			
Denominator		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with intent of placing an endotracheal tube event was in prehospital setting specified query time period		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54			
		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with intent of placing an endotracheal tube event was in prehospital setting specified query time period same period as numerator		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54			
Denominator  Denominator Data Source		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with intent of placing an endotracheal tube event was in prehospital setting specified query time period		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54			
		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with intent of placing an endotracheal tube event was in prehospital setting specified query time period same period as numerator		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54			
Denominator Data Source Population Subset		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with intent of placing an endotracheal tube event was in prehospital setting specified query time period same period as numerator EMS Medical Records		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54			
Denominator Data Source Population Subset Numerator (N)		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with intent of placing an endotracheal tube event was in prehospital setting specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52			
Denominator Data Source Population Subset		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with intent of placing an endotracheal tube event was in prehospital setting specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.	ар <b>ЕМ</b>	EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  Pediatric endotracheal tube is			
Denominator Data Source Population Subset Numerator (N)		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with intent of placing an endotracheal tube event was in prehospital setting specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.		EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52			
Denominator Data Source Population Subset Numerator (N)		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with intent of placing an endotracheal tube event was in prehospital setting specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.  Elusion Criteria patient has not reached age 15	ар <b>ЕМ</b>	EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  Pediatric endotracheal tube is			
Denominator Data Source  Population Subset Numerator (N)		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with intent of placing an endotracheal tube event was in prehospital setting specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.  Elusion Criteria  patient has not reached age 15 insertion is passing of an	ар <b>ЕМ</b>	EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  Pediatric endotracheal tube is			
Denominator Data Source  Population Subset Numerator (N)		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with intent of placing an endotracheal tube event was in prehospital setting specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.  Elusion Criteria patient has not reached age 15	ар <b>ЕМ</b>	EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  Pediatric endotracheal tube is			
Denominator Data Source  Population Subset Numerator (N)		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with intent of placing an endotracheal tube event was in prehospital setting specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.  Elusion Criteria patient has not reached age 15 insertion is passing of an ET tube into the trachea with confirmation by presence of bilateral breath	ар <b>ЕМ</b>	EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  Pediatric endotracheal tube is			
Denominator Data Source Population Subset Numerator (N)		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with intent of placing an endotracheal tube event was in prehospital setting specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.  Elusion Criteria  patient has not reached age 15 insertion is passing of an ET tube into the trachea with confirmation by presence of bilateral breath sounds in lungs on	ар <b>ЕМ</b>	EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  Pediatric endotracheal tube is			
Denominator Data Source  Population Subset Numerator (N)		patient has not reached age 15 Attempt is laryngoscopy and the passing of a ET tube beyond the teeth or upper soft palate with intent of placing an endotracheal tube event was in prehospital setting specified query time period same period as numerator EMS Medical Records  the number of patients whom inserted.  Elusion Criteria patient has not reached age 15 insertion is passing of an ET tube into the trachea with confirmation by presence of bilateral breath	ар <b>ЕМ</b>	EMSA #36  EMSA #  EMSA #54C-A  EMSA #54  EMSA #52  Pediatric endotracheal tube is			

	1	1661		
		auscultation.		
		event was in prehospital		
		setting		
		subset of denominator		
		specified query time period		
		same period as		
		denominator		
Numerator Data Source		EMS Medical Records		
		ED Chart		
Description of Indicator		numerator value (N) divided	by d	enominator value (D) multiplied
Formula		by 100 equals percentage (%	6)	` , , .
Indicator Formula		N / D = %	,	
Numeric Expression				
Linkage	Lir	kage Options	EN	ISA Data Elements
		name		EMSA #29
		dob		EMSA #35
		age		EMSA #36
		gender		EMSA #38
		admit date		EMSA#?
		procedures		EMSA #73
Stratification		Options		EMSA Data Elements
	٥	by age		EMSA #36
		by gender		EMSA #38
		by incident type		EMSA #8
		by provider level		EMSA #17-20
Indicator Exclusion Criteria		adult oral intubations		
		nasal intubations		
References		American Heart Associat	ion.	Textbook on Advanced
		Cardiac Life Support, (20		
				ns Title 22, Social Security
		Division 9, Prehospital E		
				xperience; Paramedics to
				saster Medicine: 1995, Vol 10
		No 4, (Sup S23)		, , , , , , , , , , , , , , , , , , , ,
			mer	nt Study. 1997 LA County EMS
		Services	,,,,,	it Stady. 1007 Ert Sounty Ewis
		Skelton MB, McSwain Ni	FΔ	study of Cognitive and
				Among Trained paramedics.
		JACEP 1997;6: 436-438		
		·		y of Mannequin and Human
		Subjects for Endotrachea		
				Me; 1991, Vol 20 p 1314-1318
Source		California EMSA Vision Proje	oct	10, 1001, 10120 p 1014 1010
Source		Cambina Livion vision Fluje	, U (	

CORE INDICATOR Index # SK1F	ADVANCED PROVIDER SKILLS		
Measure	Frequency of Skill Performance Pediatric Endotracheal Intubation		
CORE INDICATOR REF #SK1	CLINICAL SKILLS UTILIZATION		
Objective	licensed EMT-P personnel.	liatric ET performed per year per	
Classification	□ medical care - clinical		
Type of Measure	□ Process		
Domain of Performance	□ Frequency		
Indicator Reporting Value	□ Number per licensed EMT-P		
Display Format	<ul><li>□ Table</li><li>□ Cube Chart</li><li>□ Bar Chart</li><li>□ Line Graph</li></ul>		
Frequency of Display	☐ Monthly x 12		
Measures of Central Tendency	□ mean - Yes □ mode - No □ variance - No □ standard deviation - Yes		
Trending Analysis	□ NA		
Minimum Data Values	□ 30 values per measure		
Sampling	□ Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)	□ the number of licensed EMT	F-P personnel in California	
Denominator	Inclusion Criteria	EMSA Data Elements	
	<ul> <li>EMT-Paramedics</li> <li>Currently licensed in state California</li> <li>specified query time period same period as numerator</li> </ul>	□ EMSA #36 □ EMSA # □ EMSA #	
Denominator Data Source	□ LEMSA EMSA		
Population Subset	□ the number of pediatric ET in	nsertions	

Numerator (N)		
Numerator	Inclusion Criteria	EMSA Data Elements
Numerator Data Source  Description of Indicator Formula	<ul> <li>patient has not reached age 15</li> <li>insertion is passing of a nasal ET tube into the trachea with confirmation by presence of bilateral breath sounds in lungs on auscultation and absence of air in stomach on auscultation.</li> <li>event was in prehospital setting</li> <li>subset of denominator</li> <li>specified query time period same period as denominator</li> <li>EMS Medical Records</li> <li>ED Chart</li> <li>numerator value (N) divided number of pediatric ET insertion</li> </ul>	by denominator value (D) equals
	□ N / D = Number of pediatric E	·
Indicator Formula  Numeric Expression	personnel	Trinoordono por noonood
Linkage	Linkage Options	EMSA Data Elements
	□ procedures	□ EMSA #29
Ctratification		□ EMSA #35
Stratification	Options  ☐ by incident type	EMSA Data Elements  □ EMSA #36
	□ by provider level	☐ EMSA #3820
Indicator Exclusion Criteria	<ul><li>adult oral intubations</li></ul>	
	<ul><li>nasal intubations</li></ul>	
References	<ul> <li>American Heart Associat Cardiac Life Support, (20</li> <li>California Code of Regul Division 9, Prehospital E</li> <li>O'Connor, R MD; ET Fie Proficiency, Prehospital 8 No 4, (Sup S23)</li> <li>Pediatric Airway Manage Services</li> <li>Skelton MB, McSwain NB Technical Skills Deteriors JACEP 1997;6: 436-438 Stratton S., Prospective Stud</li> </ul>	ations Title 22, Social Security MS 1991 Id experience; Paramedics to & Disaster Medicine: 1995, Vol 10 ement Study. 1997 LA County EMS  E. A study of Cognitive and ation Among Trained paramedics.  By of Mannequin and Human tubation training for Paramedics, 20 p 1314-1318

CORE INDICATOR Index # SK1G	ADVANCED PROVIDER SKILLS		
Measure	Insertion Rate Pediatric	Peripheral IV Access	
CORE INDICATOR REF	INICAL	Tempheral IV Access	
#SK1	(ILLS UTILIZATION		
Objective		tion rate per total attempts at pediatric	
Classification	peripheral IV for EN medical care - clinic		
Type of Measure	Process	aı	
Domain of Performance	Psychomotor skills		
Indicator Reporting Value	%		
Display Format	Table		
	Cube Chart		
	□ Bar Chart □ Line Graph		
	Line Graph Process Control Ch	art	
Frequency of Display	Monthly x 12	AI L	
Measures of Central	mean - Yes		
Tendency	mode - No		
	variance - No		
	standard deviation -	Yes	
Trending Analysis	NA		
Minimum Data Values	30 values per meas Periodic - Rate	ure	
Sampling Aggregation	Yes		
Blinded	Yes		
Beta Testing	None to Date		
Population Denominator (D)		pt s at pediatric peripheral IV	
Denominator	clusion Criteria	EMSA Data Elements	
	patient has not reac age 15	hed EMSA #36	
	Attempt is breaking skin with intent to in	sert	
	peripheral IV acces event was in prehos	pital	
	setting specified query time	□ EMSA #54	
	same period as nur		
Denominator Data Source	EMS Medical Recor	ds	
Population Subset Numerator (N)	the number of patie inserted.	nts whom a pediatric peripheral IV was	
Numerator	clusion Criteria	EMSA Data Elements	
	patient has not reac	hed discharge status (TBD)	
	age 15 insertion is evidence access to venous sy and free flow of IV s	/stem olution	
	into venous system event was in prehos setting	pital	
	subset of denomina specified query time same period as		

		denominator	
Numerator Data Source		EMS Medical Records	
		ED Chart	
Description of Indicator		` ,	by denominator value (D) multiplied
Formula		by 100 equals percentage (%	<b>b</b> )
Indicator Formula		N / D = %	
Numeric Expression			
Linkage		nkage Options	EMSA Data Elements
		name	□ EMSA #29
		dob	□ EMSA #35
		age .	□ EMSA #36
		gender	□ EMSA #38
		admit date	□ EMSA#?
Stratification		procedures	□ EMSA #73  EMSA Data Elements
Stratification		Options	
		by age by gender	□ EMSA #36 □ EMSA #38
		by incident type	□ EMSA #8
		by provider level	□ EMSA #17-20
Indicator Exclusion Criteria		patients age 15 or older	LW3A #17-20
References	_		ion, Textbook on Advanced
Kelefelices		Cardiac Life Support, (20	
			ations Title 22, Social Security
		Division 9, Prehospital E	
		•	Id experience; Paramedics to
			Disaster Medicine: 1995, Vol 10
		No 4, (Sup S23)	,,
		, . ,	ment Study. 1997 LA County EMS
		Services	
		<ul> <li>Skelton MB, McSwain NI</li> </ul>	E. A study of Cognitive and
		Technical Skills Deteriora	ation Among Trained paramedics.
		JACEP 1997;6: 436-438	
		Stratton S., Prospective S.	Study of Mannequin and Human
		Subjects for Endotrachea	I Intubation training for
			rg Me; 1991, Vol 20 p 1314-1318
Source		California EMSA Vision Proje	ct

CORE INDICATOR Index # SK1H	ADVANCED PROVIDER SKILLS			
Measure	Frequency of Skill Performance Pediatric Peripheral IV Access			
CORE INDICATOR REF #SK1	CLINICAL SKILLS UTILIZATION			
Objective	□ to measure frequency of pediatric IV Access is performed per year per licensed EMT-P personnel.			
Classification		medical care - clinical		
Type of Measure	□ Process			
Domain of Performance	□ Frequency			
Indicator Reporting Value	□ Number per licensed EMT-P			
Display Format	□ Table □ Cube Chart □ Bar Chart □ Line Graph	□ Cube Chart □ Bar Chart		
Frequency of Display	☐ Monthly x 12			
Measures of Central Tendency	□ mean - Yes □ mode - No □ variance - No □ standard deviation - Yes			
Trending Analysis	□ NA			
Minimum Data Values	□ 30 values per measure	□ 30 values per measure		
Sampling	□ Periodic - Rate			
Aggregation	□ Yes			
Blinded	□ Yes			
Beta Testing	□ None to Date			
Population Denominator (D)	□ the number of licensed EM7	F-P personnel in California		
Denominator	Inclusion Criteria	EMSA Data Elements		
	<ul> <li>EMT-Paramedics</li> <li>Currently licensed in state California</li> <li>specified query time period same period as numerator</li> </ul>	□ EMSA #36 □ EMSA # □ EMSA #		
Denominator Data Source	□ LEMSA □ EMSA			
Population Subset	the number of pediatric perip	heral IV insertions		

Numerator (N)		
Numerator	Inclusion Criteria	EMSA Data Elements
	<ul> <li>patient has not reached age 15</li> <li>insertion is evidence of access to venous system and free flow of IV solution into venous system.</li> <li>event was in prehospital setting</li> <li>subset of denominator</li> <li>specified query time period same period as denominator</li> <li>EMS Medical Records</li> </ul>	
Numerator Data Source	□ ED Chart	by denominator value (D) equals
Description of Indicator Formula	number of pediatric periphera personnel	al IV insertions per licensed
Indicator Formula	□ N / D = Number of pediatric p personnel	peripheral IV insertions per licensed
Numeric Expression		
Linkage	Linkage Options	EMSA Data Elements
	□ procedures	□ EMSA #29 □ EMSA #35
Stratification	Options	EMSA Data Elements
	<ul><li>by incident type</li><li>by provider level</li></ul>	□ EMSA #36 □ EMSA #3820
Indicator Exclusion Criteria	<ul><li>adult oral intubations</li><li>nasal intubations</li></ul>	
References	<ul> <li>Cardiac Life Support, (20</li> <li>California Code of Regul Division 9, Prehospital E</li> <li>O'Connor, R MD; ET Fie Proficiency, Prehospital &amp; No 4, (Sup S23)</li> <li>Pediatric Airway Manage Services</li> <li>Skelton MB, McSwain NB Technical Skills Deteriora JACEP 1997;6: 436-438</li> <li>Stratton S., Prospective &amp; Subjects for Endotrachea</li> </ul>	ations Title 22, Social Security MS 1991 Id experience; Paramedics to & Disaster Medicine: 1995, Vol 10  ement Study. 1997 LA County EMS  E. A study of Cognitive and ation Among Trained paramedics.  Study of Mannequin and Human
Source	□ California EMSA Vision Proje	

CORE INDICATOR Index # SK1I	<u>A</u> [	OVANCED PROVIDER SKILLS	<u>S</u>
Measure	% Insertion Rate		
		Pediatric Intra-	osseous Access
CORE INDICATOR REF		INICAL	
#SK1 Objective	SK	ILLS UTILIZATION	per total attempts at pediatric
Objective	_	intraosseous access for EM	
Classification		medical care - clinical	·
Type of Measure		Process	
Domain of Performance		Psychomotor skills	
Indicator Reporting Value		%	
Display Format		Table Cube Chart	
		Bar Chart	
		Line Graph	
		Process Control Chart	
Frequency of Display		Monthly x 12	
Measures of Central		mean - Yes	
Tendency		mode - No	
		variance - No	
Town die er Amelonie		standard deviation - Yes	
Trending Analysis Minimum Data Values		NA 20 values per massure	
		30 values per measure Periodic - Rate	
Sampling Aggregation		Yes	
Blinded		Yes	
Beta Testing	_	None to Date	
Population Denominator (D)			pediatric intraosseous access
Denominator	Inc	clusion Criteria	EMSA Data Elements
		patient has not reached age 15	□ EMSA #36
		Attempt is breaking the skin with intent to insert	□ EMSA#
		peripheral IO access event was in prehospital	□ EMSA #54C-A
		setting specified query time period	□ EMSA #54
	<b>J</b>	same period as numerator	□ EMSA #52
Denominator Data Source		EMS Medical Records	
Population Subset		the number of patients whom	a pediatric intraosseous insertion
Numerator (N)		is performed	
Numerator	Inc	clusion Criteria	EMSA Data Elements
		patient has not reached	□ discharge status ( <b>TBD)</b>
		age 15	
		insertion is evidence of access to venous system	
		and free flow of IV solution	
		into venous system.	
		event was in prehospital	
		setting	
		subset of denominator	
		specified query time period	
		same period as	Page M

		denominator	
Numerator Data Source		EMS Medical Records	
		ED Chart	
Description of Indicator		` ,	py denominator value (D) multiplied
Formula		by 100 equals percentage (%	b)
Indicator Formula		N / D = %	
Numeric Expression			
Linkage		nkage Options	EMSA Data Elements
		name	□ EMSA #29
		dob	□ EMSA #35
		age	□ EMSA #36
		gender	□ EMSA #38
		admit date	□ EMSA # ?
Stratification		procedures	■ EMSA #73  EMSA Data Elements
Stratification		Options	
		by age by gender	<ul><li>□ EMSA #36</li><li>□ EMSA #38</li></ul>
		by incident type	□ EMSA #8
		by provider level	□ EMSA #17-20
Indicator Exclusion Criteria		patients age 15 or older	<b>L</b> LW3A #17-20
References	•		ion, Textbook on Advanced
Kererenees		Cardiac Life Support, (20	
			ations Title 22, Social Security
		Division 9, Prehospital E	
		· · · · · · · · · · · · · · · · · · ·	ld experience; Paramedics to
			Disaster Medicine: 1995, Vol 10
		No 4, (Sup S23)	
		, . ,	ment Study. 1997 LA County EMS
		Services	, ,
		<ul> <li>Skelton MB, McSwain NB</li> </ul>	. A study of Cognitive and
		Technical Skills Deteriora	ation Among Trained paramedics.
		JACEP 1997;6: 436-438	
			Study of Mannequin and Human
		Subjects for Endotrachea	<u> </u>
			rg Me; 1991, Vol 20 p 1314-1318
Source		California EMSA Vision Proje	ct

CORE INDICATOR	ADVANCED PROVIDER SKILLS	<u>S</u>		
Index # SK1J				
Measure	Frequency of Skill Performance Pediatric Intra-osseous Access			
		2		
CORE INDICATOR REF #SK1	CLINICAL SKILLS UTILIZATION			
	□ to measure frequency of pediatric Intraosseous Access is			
Objective	performed per year per licensed EMT-P personnel.			
Classification				
Type of Measure	□ Process			
Domain of Performance	□ Frequency			
Indicator Reporting Value	□ Number per licensed EMT-P			
Display Format	□ Table □ Cube Chart			
	□ Bar Chart			
Frequency of Display	☐ Line Graph ☐ Monthly x 12			
Measures of Central	□ mean - Yes			
Tendency	<ul><li>□ mode - No</li><li>□ variance - No</li></ul>			
	<ul><li>standard deviation - Yes</li></ul>	□ standard deviation - Yes		
Trending Analysis	□ NA			
Minimum Data Values	□ 30 values per measure			
Sampling	□ Periodic - Rate			
Aggregation	□ Yes			
Blinded	□ Yes			
Beta Testing	□ None to Date			
Population Denominator (D)	□ the number of licensed EM1	r-P personnel in California		
Denominator	Inclusion Criteria	EMSA Data Elements		
	<ul><li>EMT-Paramedics</li><li>Currently licensed in state</li></ul>	□ EMSA #36		
	California	□ EMSA#		
	<ul><li>specified query time period same period as numerator</li></ul>	□ EMSA#		
Denominator Data Source	□ LEMSA □ EMSA			
Population Subset	□ the number of pediatric perip	heral IO insertions		

Numerator (N)		
Numerator	Inclusion Criteria	EMSA Data Elements
	<ul> <li>patient has not reached age 15</li> <li>insertion is evidence of access to venous system and free flow of IV solution into venous system.</li> <li>event was in prehospital setting</li> <li>subset of denominator</li> <li>specified query time period same period as denominator</li> </ul>	
Numerator Data Source	<ul><li>EMS Medical Records</li><li>ED Chart</li></ul>	
Description of Indicator Formula	numerator value (N) divided number of pediatric IO insert	by denominator value (D) equals ions per licensed personnel
Indicator Formula Numeric Expression	□ N / D = Number of pediatric I personnel	O insertions per licensed
Linkage	Linkage Options	EMSA Data Elements
	procedures	□ EMSA #29 □ EMSA #35
Stratification	Options	EMSA Data Elements
	<ul><li>by incident type</li><li>by provider level</li></ul>	□ EMSA #36 □ EMSA #3
Indicator Exclusion Criteria	□ patients age 15 or older	
References	<ul> <li>Cardiac Life Support, (20</li> <li>California Code of Regul Division 9, Prehospital E</li> <li>O'Connor, R MD; ET Fie Proficiency, Prehospital &amp; No 4, (Sup S23)</li> <li>Pediatric Airway Manage Services</li> <li>Skelton MB, McSwain NB Technical Skills Deteriora JACEP 1997;6: 436-438</li> <li>Stratton S., Prospective Subjects for Endotrachea</li> </ul>	ations Title 22, Social Security MS 1991 Id experience; Paramedics to & Disaster Medicine: 1995, Vol 10  ement Study. 1997 LA County EMS  E. A study of Cognitive and ation Among Trained paramedics.  Study of Mannequin and Human
Source	□ California EMSA Vision Proje	

CORE INDICATOR Index # TH1A	DESIGNATED TRAUMA HOSPITALS		
Measure	Trauma Hospitals Per Response Area		
CORE INDICATOR REF	SYSTEM OPERATIONS		
#TH1	DESIGNATED TRAUMA HOSPIT		
Objective		nated trauma hospitals per EMS	
Classification	response area  System Ops – Trauma Hospi	itals	
Type of Measure	□ Structural	naio	
Domain of Performance	□ Volume		
Indicator Reporting Value	<ul><li>Number per response area</li></ul>		
Display Format	□ List		
Francisco of Display	□ Cube Chart		
Frequency of Display Measures of Central	☐ Monthly x 12 ☐ mean - Yes		
Tendency	standard deviation - no		
Trending Analysis	□ NA		
Minimum Data Values	☐ 30 values per measure		
Sampling	<ul><li>Periodic - Rate</li></ul>		
Aggregation	□ Yes		
Blinded	☐ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)  Denominator	<ul><li>□ Response Area</li><li>Inclusion Criteria</li></ul>	EMSA Data Elements	
Denominator	inclusion Criteria	EMISA Data Elements	
	□ patient has reached age 15	□ EMSA #36	
	□ Specified geographic		
	Response Area as defined by local EMS Authority	□ EMSA #54V □ EMSA #54C-A	
Denominator Data Source	□ LEMSA	LIVISA #34C-A	
Bononinator Bata Goardo	☐ Trauma Hospitals		
Population Subset	the number of designated tra	uma hospitals	
Numerator (N)	-		
Numerator	Inclusion Criteria	EMSA Data Elements	
	<ul><li>hospitals designated by local EMS Authority as a</li></ul>		
	Trauma Specialty Care		
	□ subset of denominator		
Numerator Data Source	□ LEMSA		
Description of Indicator		by denominator value (D) equals	
Formula	number per area		
Indicator Formula Numeric Expression	□ N / D = number trauma hospi	itals per response area	
Linkage	Linkage Options	EMSA Data Elements	
Stratification	Options	EMSA Data Elements	
Indicator Exclusion Criteria	<ul><li>non-designated hospitals</li></ul>		
Indicator Exclusion Officeria	non defined response areas		
References	Local Trauma Registries		
Source	<ul><li>California EMSA Vision Proje</li></ul>		
CORE INDICATOR	DESIGNATED TRAUMA HOSPI	TALS	
Index # TH1B			
Measure	Trauma Cases Received Per 24 hrs		
CORE INDICATOR REF	SYSTEM OPERATIONS		
#TH1	DESIGNATED TRAUMA HOSPIT	ΓALS	

Objective		to measure average number		
	_	designated trauma hospitals		
Classification	<b>-</b>	System Ops – Trauma Hospi	tais	
Type of Measure	<b>-</b>	Structural		
Domain of Performance	)	Volume		
Indicator Reporting Value	)	Average number per 24 hrs Bar Chart		
Display Format		List		
		Cube Chart		
Frequency of Display	ם כ	Monthly x 12		
Measures of Central		mean - Yes		
Tendency	_			
Trending Analysis		NA		
Minimum Data Values		30 values per measure		
Sampling		Periodic - Rate		
Aggregation		Yes		
Blinded		Yes		
Beta Testing		None to Date		
Population Denominator (D)		24 hour periods x at least 30		
Denominator	Inc	lusion Criteria	EMSA Data Elements	
		24 hrs period = 1 day	□ EMSA #36	
		at least 30 days to		
		average		
Denominator Data Source		LEMSA		
		Trauma Hospitals		
Population Subset			received at a designated trauma	
Numerator (N)	lus a	hospitals	FMCA Data Flamenta	
Numerator		hospitals designated by	EMSA Data Elements	
	_	local EMS Authority as a	<b>J</b>	
	l	Trauma Specialty Care		
		Trauma Cases accepted		
	. –			
	1	from EMS system		
		from EMS system subset of denominator		
Numerator Data Source				
Numerator Data Source		subset of denominator		
Numerator Data Source  Description of Indicator		subset of denominator LEMSA Trauma Hospital	by denominator value (D) equals	
Description of Indicator Formula		subset of denominator  LEMSA  Trauma Hospital  numerator value (N) divided average number per 24 hour	period	
Description of Indicator Formula Indicator Formula		subset of denominator LEMSA Trauma Hospital numerator value (N) divided	period	
Description of Indicator Formula Indicator Formula Numeric Expression		subset of denominator  LEMSA  Trauma Hospital  numerator value (N) divided average number per 24 hour  N / D = average number trau	period ma cases per 24 hrs	
Description of Indicator Formula Indicator Formula	Lin	subset of denominator  LEMSA  Trauma Hospital  numerator value (N) divided average number per 24 hour	period ma cases per 24 hrs  EMSA Data Elements	
Description of Indicator Formula Indicator Formula Numeric Expression Linkage		subset of denominator  LEMSA  Trauma Hospital  numerator value (N) divided laverage number per 24 hour  N / D = average number traunkage Options	period ma cases per 24 hrs  EMSA Data Elements	
Description of Indicator Formula Indicator Formula Numeric Expression	Lin	subset of denominator  LEMSA  Trauma Hospital  numerator value (N) divided average number per 24 hour  N / D = average number trau	period ma cases per 24 hrs  EMSA Data Elements  EMSA Data Elements	
Description of Indicator Formula Indicator Formula Numeric Expression Linkage Stratification	Lin	subset of denominator  LEMSA  Trauma Hospital numerator value (N) divided laverage number per 24 hour  N / D = average number trau  Ikage Options  Options	period ma cases per 24 hrs  EMSA Data Elements	
Description of Indicator Formula Indicator Formula Numeric Expression Linkage	Lin	subset of denominator  LEMSA  Trauma Hospital  numerator value (N) divided laverage number per 24 hour  N / D = average number traunakage Options  Options  non-designated hospitals	period ma cases per 24 hrs  EMSA Data Elements  EMSA Data Elements	
Description of Indicator Formula Indicator Formula Numeric Expression Linkage Stratification	Lin	subset of denominator  LEMSA  Trauma Hospital numerator value (N) divided laverage number per 24 hour  N / D = average number trau  Ikage Options  Options	period ma cases per 24 hrs  EMSA Data Elements  EMSA Data Elements	

CORE INDICATOR Index # TR1A	CRITICAL TRAUMA		
Measure	Frequency Blunt Trauma		
CORE INDICATOR REF	TRAUMA - ADULT		
#TR1	TREATMENT PROTOCOL UTILIZATION		
Objective	to measure % of critical trauma cases that are caused by a blunt		
Classification	mechanism of injury  medical care - clinical		
Type of Measure	structural		
Domain of Performance	□ Volume - Frequency		
Indicator Reporting Value	<b>"</b> %		
Display Format	□ List		
	□ Cube Chart		
	□ Bar Chart		
	□ Line Graph		
Frequency of Display	□ Monthly x 12		
Measures of Central	□ mean - Yes □ mode - No		
Tendency	□ mode - No □ variance - No		
	□ standard deviation - Yes		
Trending Analysis	□ NA		
Minimum Data Values	□ 30 values per measure		
Sampling	□ Periodic - Rate		
Aggregation	□ Yes		
Blinded	□ Yes		
Beta Testing	□ None to Date		
Population Denominator (D)	the number of all critical trau		
Denominator	Inclusion Criteria	EMSA Data Elements	
Denominator Data Source	<ul> <li>patient has reached age 15</li> <li>Trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting</li> <li>Critical is an adult patient with any of the following physiologic criteria:</li> <li>an adult patient which meets local EMS trauma criteria which mandates triage to a designated trauma hospital.</li> <li>specified query time period same as numerator</li> <li>LEMSA</li> <li>Designated Trauma Hospital</li> <li>EMS Medical Records</li> <li>hospital discharge records</li> </ul>	□ EMSA#	
	□ OSHPD discharge record		
Population Subset	the number of patients with blunt trauma as a mechanism of		
Numerator (N)	injury		
Numerator	Inclusion Criteria	EMSA Data Elements	
	<ul> <li>subset of denominator</li> <li>blunt trauma mechanism</li> <li>specified query time period same as denominator</li> </ul>	□ EMSA#	

Description of Indicator Formula Indicator Formula Numeric Expression		<ul> <li>□ Designated Trauma Hospital</li> <li>□ EMS Medical Records</li> <li>□ Hospital discharge records</li> <li>□ OSHPD discharge record</li> <li>□ numerator value (N) divided by denominator value (D) multiplied by 100 equals percentage (%)</li> </ul>			
Linkage	Lir	nkage Options	EN	ISA Data Elements	
	000000	name dob age gender admit date procedures	00000	EMSA #29 EMSA #35 EMSA #36 EMSA #38 EMSA # ? EMSA #73	
Stratification		Options		EMSA Data Elements	
Indicator Exclusion Criteria	00000000	by gender by incident type by response times by scene times by provider level  Penetrating Trauma Mechanisms Non critical trauma patients			
References	0 0 0 0 0	Critical Trauma Indicator; Mountain-Valley EMS; Standards and Guidelines for EMS System Evaluation and Improvement Project; 2000  Cowley, RA (1976) The resuscitation and stabilization of major multiple trauma patients in a trauma center environment. Clinical Medicine. 83(14)  Cales, R. H. and Helig, Jr., W. (1986) Trauma Care Systems. Aspen Publishers. Rockville, MD.  Local EMS Trauma Policies if applicable Plant. J Critical Trauma – Calgary Trauma Registry; Limitations of Prehospital Index in Identifying Patients in Need of Major Trauma Centers. Ann of Emerg Med; 26:2, 133-137. 1995			
Source		California EMSA Vision Proje	ect		

CORE INDICATOR Index # TR1B	CRITICAL TRAUMA			
Measure	Frequency Penetrating Trauma			
CORE INDICATOR REF	TRAUMA - ADULT			
#TR1	TREATMENT PROTOCOL UTIL			
Objective		na cases that are caused by a		
Classification	penetrating mechanism of inj  medical care - clinical	ury		
Type of Measure	structural			
Domain of Performance	□ Volume - Frequency			
Indicator Reporting Value	□ %			
Display Format	□ List			
	□ Cube Chart			
	□ Bar Chart			
Frequency of Display	☐ Line Graph ☐ Monthly x 12			
Measures of Central	mean - Yes			
Tendency	□ mode - No			
, , , , , , , , , , , , , , , , , , , ,	□ variance - No			
	<ul><li>standard deviation - Yes</li></ul>			
Trending Analysis	□ NA			
Minimum Data Values	□ 30 values per measure			
Sampling	<ul><li>Periodic - Rate</li><li>Yes</li></ul>			
Aggregation Blinded	□ Yes			
Beta Testing	□ Yes □ None to Date			
Population Denominator (D)	☐ the number of all critical traur	ma cases		
Denominator	Inclusion Criteria	EMSA Data Elements		
	patient has reached age 15	□ EMSA#		
	Trauma is an injury caused by blunt or penetrating			
	kinematic mechanism in			
	the prehospital setting			
	□ EMSA#			
	Critical is an adult patient with			
	any of the following physiologic			
	criteria: an adult patient which			
	meets local EMS trauma			
	criteria which mandates			
	triage to a designated			
	trauma hospital.			
	□ specified query time period	□ EMSA#		
	same as numerator	LIVISA#		
Denominator Data Source	□ LEMSA			
	<ul><li>Designated Trauma Hospital</li></ul>			
	□ EMS Medical Records			
	☐ Hospital discharge records			
Population Subset	<ul><li>OSHPD discharge record</li><li>the number of patients with p</li></ul>	penetrating trauma as a mechanism		
Numerator (N)	of injury	chenamy nauma as a mechanism		
Numerator	Inclusion Criteria	EMSA Data Elements		
	□ subset of denominator	□ EMSA#		
	<ul><li>penetrating trauma</li></ul>			
	mechanism			
	□ specified query time period			
	same as denominator			

Description of Indicator Formula Indicator Formula		Designated Trauma Hospital EMS Medical Records hospital discharge records OSHPD discharge record numerator value (N) divided by denominator value (D) multiplied by 100 equals percentage (%)			
Numeric Expression	_	N/D = 70			
Linkage	Lir	nkage Options	EN	ISA Data Elements	
	00000	name dob age gender admit date procedures	00000	EMSA #29 EMSA #35 EMSA #36 EMSA #38 EMSA # ? EMSA #73	
Stratification		Options		EMSA Data Elements	
	00000	by age by gender by incident type by response times by scene times by provider level	0 0 0 0 0	EMSA #36 EMSA #38 EMSA #8 EMSA #17-20 EMSA #8 EMSA #73 (	
Indicator Exclusion Criteria	000	Blunt Trauma Mechanisms Non critical trauma patients Non-trauma patients			
References	0 0 0 00	Guidelines for EMS System Evaluation and Improvement Project; 2000 Cowley, RA (1976) The resuscitation and stabilization of major multiple trauma patients in a trauma center environment. Clinical Medicine. 83(14) Cales, R. H. and Helig, Jr., W. (1986) Trauma Care Systems. Aspen Publishers. Rockville, MD. Local EMS Trauma Policies if applicable			
Source					

CORE INDICATOR Index # TR1C	CRITICAL TRAUMA			
Measure	Frequency Pediatric			
CORE INDICATOR REF	TRAUMA - PEDIATRIC			
#TR1	TREATMENT PROTOCOL UTIL			
Objective	to measure % of critical traur patients	ma cases that involve Pediatric		
Classification	medical care - clinical			
Type of Measure	□ structural			
Domain of Performance	□ Volume - Frequency			
Indicator Reporting Value	□ %			
Display Format	□ List			
	□ Cube Chart			
	<ul><li>Bar Chart</li><li>Line Graph</li></ul>			
Frequency of Display	□ Monthly x 12			
Measures of Central	mean - Yes			
Tendency	□ mode - No			
•	□ variance - No			
	standard deviation - Yes			
Trending Analysis	□ NA			
Minimum Data Values Sampling	□ 30 values per measure □ Periodic - Rate			
Aggregation	☐ Yes			
Blinded	□ Yes			
Beta Testing	□ None to Date			
Population Denominator (D)	the number of all critical trau	ma cases		
Denominator	Inclusion Criteria	EMSA Data Elements		
	<ul> <li>patient has NOT reached age 15</li> <li>trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting</li> <li>Critical is a patient with the following physiologic criteria:</li> <li>an pediatric patient which meets local EMS trauma criteria which mandates triage to a designated trauma or specialty care center due to traumatic injuries</li> <li>specified query time period same as</li> </ul>	□ EMSA#		
Denominator Data Source	numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records OSHPD discharge record			
Population Subset Numerator (N)	□ the number of pediatric patie			
Numerator	Inclusion Criteria	EMSA Data Elements		
	□ Subset of denominator	□ EMSA#		

		specified query time period		
	_	same as denominator		
Numerator Data Source		LEMSA		
Numerator Bata Gource		Designated Trauma Hospital		
		EMS Medical Records		
		Hospital discharge records		
	J	OSHPD discharge record		
Description of Indicator			by d	enominator value (D) multiplied
Formula	_	by 100 equals percentage (%		enominator value (b) multiplied
Indicator Formula		N / D = %	ν,	
Numeric Expression	_	N/ B = 70		
Linkage	Lir	nkage Options	ΕN	ISA Data Elements
J	0	name		EMSA #29
		dob		EMSA #35
		age		EMSA #36
		gender		EMSA #38
		admit date		EMSA#?
		procedures		EMSA #73
Stratification		Options		EMSA Data Elements
		by age		EMSA #36
		by gender		EMSA #38
		by incident type		EMSA #8
		by response times		EMSA #17-20
		by scene times		EMSA #8
		by provider level		EMSA #73 (
Indicator Exclusion Criteria		Patients age 15 or older		
		Non-critical trauma patients		
		Non-trauma patients		
References				ain-Valley EMS; Standards and
		Guidelines for EMS System	Eval	uation and Improvement
		Project; 2000		
				tion and stabilization of major
		multiple trauma patients in a trauma center environment. Clinical		
		Medicine. 83(14)	, ,,	000) T
		Cales, R. H. and Helig, Jr., V		
		Aspen Publishers. Rockville,		
		Local EMS Trauma Policies i		
				y Trauma Registry; Limitations
		of Prehospital Index in Identif		
0		Trauma Centers. Ann of Eme		/ieu, 20.2, 133-137. 1995
Source		California EMSA Vision Proje	#CT	

CORE INDICATOR Index # TR1D	CRITICAL TRAUMA			
Measure	Frequency Head, Neck, Face Trauma			
CORE INDICATOR REF	TRAUMA - ADULT			
#TR1	TREATMENT PROTOCOL UTILIZATION			
Objective	to measure % of critical traun face injuries	na cases that involve head, neck or		
Classification	medical care - clinical			
Type of Measure	□ structural			
Domain of Performance	□ Volume - Frequency			
Indicator Reporting Value	□ %			
Display Format	□ List			
	□ Cube Chart			
	<ul><li>Bar Chart</li><li>Line Graph</li></ul>			
Frequency of Display	☐ Monthly x 12			
Measures of Central	□ mean - Yes			
Tendency	□ mode - No			
	□ variance - No			
	standard deviation - Yes			
Trending Analysis	□ NA			
Minimum Data Values Sampling	<ul><li>30 values per measure</li><li>Periodic - Rate</li></ul>			
Aggregation				
Blinded	□ Yes □ Yes			
Beta Testing	□ None to Date			
Population Denominator (D)	□ the number of all critical traur	na cases		
Denominator	Inclusion Criteria	EMSA Data Elements		
	<ul><li>patient has reached age 15</li><li>Trauma is an injury caused</li></ul>	□ EMSA#		
	Trauma is an injury caused by blunt or penetrating			
	kinematic mechanism in			
	the prehospital setting			
		□ EMSA#		
	Critical is an adult nations with			
	<b>Critical</b> is an adult patient with any of the following physiologic			
	criteria:			
	an adult patient which			
	meets local EMS trauma			
	criteria which mandates			
	triage to a designated trauma hospital.			
	traama noopital.	□ EMSA#		
	□ specified query time period			
	same as numerator			
Denominator Data Source	LEMSA			
	<ul> <li>Designated Trauma Hospital</li> <li>EMS Modical Boords</li> </ul>			
	□ EMS Medical Records □ hospital discharge records			
	OSHPD discharge record			
Population Subset	the number of patients with injuries to head, neck or face			
Numerator (N)	•			
Numerator	Inclusion Criteria	EMSA Data Elements		
	☐ Subset of denominator	□ EMSA#		
	<ul><li>specified query time period same as denominator</li></ul>			
Numerator Data Source	□ LEMSA			
Hamorator Data Cource				

	□ Designated Trauma Hospital				
		■ EMS Medical Records			
		1 5			
		OSHPD discharge record			
Description of Indicator				enominator value (D) multiplied	
Formula		by 100 equals percentage (%	ó)		
Indicator Formula		N / D = %			
Numeric Expression					
Linkage	Lir	nkage Options	EN	ISA Data Elements	
		name		EMSA #29	
		dob		EMSA #35	
		age		EMSA #36	
		gender		EMSA #38	
		admit date		EMSA # ?	
		procedures		EMSA #73	
Stratification		Options		EMSA Data Elements	
		by age		EMSA #36	
		by gender		EMSA #38	
		by incident type		EMSA #8	
		by response times		EMSA #17-20	
		by scene times		EMSA #8	
		by provider level		EMSA #73 (	
Indicator Exclusion Criteria		Injuries to areas other than the	ne h	ead, neck or face	
		Non critical trauma patients			
		Non-trauma patients			
References		Critical Trauma Indicator; Mo	ounta	ain-Valley EMS; Standards and	
		Guidelines for EMS System I	Eval	uation and Improvement	
		Project; 2000			
		Cowley, RA (1976) The resus	scita	tion and stabilization of major	
		multiple trauma patients in a	trau	ma center environment. Clinical	
		Medicine. 83(14)			
		Cales, R. H. and Helig, Jr., V			
		Aspen Publishers. Rockville,			
		Local EMS Trauma Policies i			
		□ Plant. J Critical Trauma – Calgary Trauma Registry; Limitations			
		of Prehospital Index in Identifying Patients in Need of Major			
		Trauma Centers. Ann of Eme	erg N	Med; 26:2, 133-137. 1995	
Source					

CORE INDICATOR Index # TR1E	CRITICAL TRAUMA				
Measure	Frequency Chest				
CORE INDICATOR REF	TRAUMA - ADULT				
#TR1	TREATMENT PROTOCOL UTIL				
Objective		ıma cases that involve chest injuries			
Classification	□ medical care - clinical				
Type of Measure	□ structural				
Domain of Performance	□ Volume - Frequency				
Indicator Reporting Value	□ %				
Display Format	☐ List☐ Cube Chart				
	Bar Chart				
	☐ Line Graph				
Frequency of Display	☐ Monthly x 12				
Measures of Central	□ mean - Yes				
Tendency	□ mode - No				
	u variance - No				
	□ standard deviation - Yes				
Trending Analysis					
Minimum Data Values					
Sampling	□ Periodic - Rate				
Aggregation Blinded	☐ Yes				
Beta Testing		☐ Yes			
Population Denominator (D)	the number of all critical trau	ıma cases			
Denominator	Inclusion Criteria	EMSA Data Elements			
		LINION Data Elements			
Denominator Data Source	<ul> <li>patient has reached age 15</li> <li>trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting</li> <li>Critical is an adult patient with any of the following physiologic criteria:         <ul> <li>an adult patient which meets local EMS trauma criteria which mandates triage to a designated trauma hospital.</li> <li>specified query time period same as numerator</li> <li>LEMSA</li> <li>Designated Trauma Hospita</li> <li>EMS Medical Records</li> <li>hospital discharge records</li> </ul> </li> </ul>	□ EMSA#			
	□ OSHPD discharge record				
Population Subset	□ the number of patients with	injuries to chest			
Numerator (N) Numerator	Inclusion Criteria	EMSA Data Elements			
Numerator	□ Subset of denominator	■ EMSA#			
	specified query time period	LIVIOA#			
	same as denominator				
Numerator Data Source					
Numerator Data Source	□ LEMSA				

		EMS Medical Records			
		☐ Hospital discharge records			
Description of Indicator		numerator value (N) divided	by d	enominator value (D) multiplied	
Formula		by 100 equals percentage (%	<b>6</b> )		
Indicator Formula		N / D = %			
Numeric Expression					
Linkage	Lir	nkage Options	EN	ISA Data Elements	
		name		EMSA #29	
		dob		EMSA #35	
		age		EMSA #36	
		gender		EMSA #38	
		admit date		EMSA # ?	
		procedures		EMSA #73	
Stratification		Options		EMSA Data Elements	
		by age		EMSA #36	
		by gender		EMSA #38	
		by incident type		EMSA #8	
		by response times		EMSA #17-20	
		by scene times		EMSA #8	
		by provider level		EMSA #73 (	
Indicator Exclusion Criteria		Injuries to areas other than the chest			
		The state of the s			
		Non-trauma patients			
References				ain-Valley EMS; Standards and	
		Guidelines for EMS System I	Eval	uation and Improvement	
		Project; 2000	٠.		
	ш	□ Cowley, RA (1976) The resuscitation and stabilization of major			
		multiple trauma patients in a trauma center environment. Clinical			
		Medicine. 83(14)			
		Cales, R. H. and Helig, Jr., V			
		Aspen Publishers. Rockville,			
		Local EMS Trauma Policies i		y Trauma Registry; Limitations	
		of Prehospital Index in Identif			
		Trauma Centers. Ann of Eme			
Source		California EMSA Vision Proje		Meu, 20.2, 130-137. 1993	
Source	Ţ	Camornia Elvion Vision Proje	<del>,</del> Ul		

CORE INDICATOR Index # TR1F	CRITICAL TRAUMA			
Measure	Frequency Abdomen			
CORE INDICATOR REF	TRAUMA - ADULT			
#TR1	TREATMENT PROTOCOL UTILIZATION			
Objective	■ to measure % of critical trauma cases that involve about	lominal		
	injuries			
Classification	medical care - clinical			
Type of Measure	structural			
Domain of Performance	□ Volume - Frequency			
Indicator Reporting Value Display Format	□ % □ List			
Display Format	☐ Cube Chart			
	□ Bar Chart			
	☐ Line Graph			
Frequency of Display	☐ Monthly x 12			
Measures of Central	□ mean - Yes			
Tendency	□ mode - No			
	□ variance - No			
Tana dia a Anal di	standard deviation - Yes			
Trending Analysis Minimum Data Values	NA 20 volume per manaura			
Sampling	□ 30 values per measure □ Periodic - Rate			
Aggregation				
Blinded	□ Yes □ Yes			
Beta Testing	□ None to Date			
Population Denominator (D)	■ the number of all critical trauma cases			
Denominator	Inclusion Criteria EMSA Data Elements			
Denominator Data Source	patient has reached age 15 trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting Critical is an adult patient with any of the following physiologic criteria:  an adult patient which meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  EMSA Designated Trauma Hospital Designated Trauma Hospital			
	<ul><li>☐ EMS Medical Records</li><li>☐ Hospital discharge records</li><li>☐ OSHPD discharge record</li></ul>			
Population Subset	□ the number of patients with injuries to abdomen			
Numerator (N) Numerator	Inclusion Criteria EMSA Data Elements			
Numerator	☐ Subset of denominator ☐ EMSA#			
	□ specified query time period			
	same as denominator			
Numerator Data Source	LEMSA			
	☐ Designated Trauma Hospital			

		☐ Hospital discharge records			
Description of Indicator Formula		numerator value (N) divided by denominator value (D) multiplied by 100 equals percentage (%)			
Indicator Formula		N / D = %	- /		
Numeric Expression					
Linkage		kage Options		ISA Data Elements	
		name		EMSA #29	
		dob		EMSA #35	
		age .		EMSA #36	
		gender		EMSA #38	
		admit date		EMSA # ?	
01(""("		procedures		EMSA #73	
Stratification		Options		EMSA Data Elements	
		by age		EMSA #36	
		by gender		EMSA #38	
		by incident type		EMSA #8	
		by response times	)	EMSA #17-20	
		by scene times	<b>–</b> (	EMSA #8	
Indicator Exclusion Criteria	0	by provider level			
indicator Exclusion Criteria		Non critical trauma patients	ie ai	odomen	
	ם כ	Non-trauma patients			
References		Critical Trauma Indicator; Mountain-Valley EMS; Standards and			
Kelefelies	_	Guidelines for EMS System I		· · · · · · · · · · · · · · · · · · ·	
		Project; 2000	_ vai	dation and improvement	
			scita	tion and stabilization of major	
		• • •		•	
		multiple trauma patients in a trauma center environment. Clinical Medicine. 83(14)			
		Cales, R. H. and Helig, Jr., V	V. (1	986) Trauma Care Systems.	
		Aspen Publishers. Rockville,			
		Local EMS Trauma Policies i			
				y Trauma Registry; Limitations	
		of Prehospital Index in Identif			
		Trauma Centers. Ann of Emerg Med; 26:2, 133-137. 1995			
Source		California EMSA Vision Proje	ect		

CORE INDICATOR Index # TR1G	CRITICAL TRAUMA				
Measure	Frequency Burns				
CORE INDICATOR REF	TRAUMA - ADULT				
#TR1		TREATMENT PROTOCOL UTILIZATION			
Objective	□ to measure % of critical trauma cases that involve thermal burn				
	injuries				
Classification	□ medical care - clinical				
Type of Measure	□ structural				
Domain of Performance	□ Volume - Frequency				
Indicator Reporting Value	□ %				
Display Format	☐ List☐ Cube Chart				
	Bar Chart				
	☐ Line Graph				
Frequency of Display	☐ Monthly x 12				
Measures of Central	mean - Yes				
Tendency	mode - No				
,	□ variance - No				
	<ul><li>standard deviation - Yes</li></ul>				
Trending Analysis	□ NA				
Minimum Data Values	30 values per measure				
Sampling	□ Periodic - Rate				
Aggregation	□ Yes				
Blinded	□ Yes				
Beta Testing	□ None to Date				
Population Denominator (D)	□ the number of all critical trau				
Denominator	Inclusion Criteria	EMSA Data Elements			
Denominator Data Source	<ul> <li>patient has reached age 15</li> <li>trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting</li> <li>Critical is an adult patient with any of the following physiologic criteria:</li> <li>an adult patient which meets local EMS trauma criteria which mandates triage to a designated trauma hospital.</li> <li>specified query time period same as numerator</li> <li>LEMSA</li> <li>Designated Trauma Hospita</li> <li>EMS Medical Records</li> <li>Hospital discharge records</li> </ul>	□ EMSA# □ EMSA#			
	□ OSHPD discharge record				
Population Subset Numerator (N)	☐ the number of patients with t	thermal burn injuries			
Numerator	Inclusion Criteria	EMSA Data Elements			
1131107	Subset of denominator specified query time period same as denominator	□ EMSA#			

Description of Indicator Formula Indicator Formula		LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records OSHPD discharge record numerator value (N) divided I by 100 equals percentage (% N / D = %	•	enominator value (D) multiplied	
Numeric Expression	<b>_</b>	N / D - /0			
Linkage	Lir	nkage Options	ΕN	ISA Data Elements	
	00000	name dob age gender admit date procedures	00000	EMSA #29 EMSA #35 EMSA #36 EMSA #38 EMSA # ? EMSA #73	
Stratification		Options		EMSA Data Elements	
	00000	by age by gender by incident type by response times by scene times by provider level	00000	EMSA #36 EMSA #38 EMSA #8 EMSA #17-20 EMSA #8 EMSA #73 (	
Indicator Exclusion Criteria	000	Injuries other than thermal burns Non-critical trauma patients			
References	0 0 0 00	Non-trauma patients  Critical Trauma Indicator; Mountain-Valley EMS; Standards and Guidelines for EMS System Evaluation and Improvement Project; 2000  Cowley, RA (1976) The resuscitation and stabilization of major multiple trauma patients in a trauma center environment. Clinical Medicine. 83(14)			
Source		California EMSA Vision Proje	ect		

CORE INDICATOR Index # TR1H	CR	RITICAL TRAUMA				
Measure	La	pse Time On Scene Less Th	an 1	0 minutes		
CORE INDICATOR REF	TR	AUMA - ADULT				
#TR1	TR	EATMENT PROTOCOL UTIL				
Objective		to measure % of critical traur injuries	na c	ases that involve thermal burn		
Classification		medical care - clinical				
Type of Measure		Process				
Domain of Performance		Effectiveness				
Indicator Reporting Value		%				
Display Format		List Cuba Chart				
		Cube Chart Bar Chart				
		□ Line Graph				
	□ Process Control Chart					
Frequency of Display		Monthly x 12				
Measures of Central		mean - Yes				
Tendency		mode - No				
		variance - No				
Trending Analysis		standard deviation - Yes NA				
Minimum Data Values		30 values per measure				
Sampling	<u> </u>	Periodic - Rate				
Aggregation		Yes				
Blinded		Yes				
Beta Testing		None to Date				
Population Denominator (D)		the number of all critical trau				
Denominator	Inc	clusion Criteria	EN	ISA Data Elements		
		patient has reached age 15		EMSA#		
		trauma is an injury caused				
	l	by blunt or penetrating				
	1					
		kinematic mechanism in the prehospital setting				
		the prehospital setting		EMSA#		
			٥	EMSA#		
		the prehospital setting  Critical is an adult patient	٥	EMSA#		
		the prehospital setting  Critical is an adult patient with any of the following physiologic criteria:		EMSA#		
		the prehospital setting  Critical is an adult patient with any of the following physiologic criteria:  Critical is an adult patient		EMSA#		
		the prehospital setting  Critical is an adult patient with any of the following physiologic criteria:  Critical is an adult patient with any of the following		EMSA#		
		the prehospital setting  Critical is an adult patient with any of the following physiologic criteria:  Critical is an adult patient with any of the following physiologic criteria:		EMSA#		
		the prehospital setting  Critical is an adult patient with any of the following physiologic criteria:  Critical is an adult patient with any of the following		EMSA#		
		the prehospital setting  Critical is an adult patient with any of the following physiologic criteria:  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated		EMSA#		
		the prehospital setting  Critical is an adult patient with any of the following physiologic criteria:  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates		EMSA#		
		the prehospital setting Critical is an adult patient with any of the following physiologic criteria: Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designat ed trauma hospital.		EMSA#		
		the prehospital setting Critical is an adult patient with any of the following physiologic criteria:  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designat ed trauma hospital.		EMSA#		
		the prehospital setting Critical is an adult patient with any of the following physiologic criteria: Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designat ed trauma hospital.		EMSA#		
Denominator Data Source		the prehospital setting Critical is an adult patient with any of the following physiologic criteria:  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designat ed trauma hospital.				
Denominator Data Source		the prehospital setting Critical is an adult patient with any of the following physiologic criteria:  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designat ed trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital				
Denominator Data Source		the prehospital setting Critical is an adult patient with any of the following physiologic criteria:  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records				
Denominator Data Source		Critical is an adult patient with any of the following physiologic criteria:  Critical is an adult patient with any of the following physiologic criteria:  meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records				
Denominator Data Source Population Subset		the prehospital setting Critical is an adult patient with any of the following physiologic criteria:  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records		EMSA#		

Numerator (N)					
Numerator	Inc	lusion Criteria	EN	ISA Data Elements	
		Subset of denominator specified query time period same as denominator		EMSA#	
Numerator Data Source	000	LEMSA Designated Trauma Hospital EMS Medical Records			
		Hospital discharge records OSHPD discharge record			
Description of Indicator Formula		numerator value (N) divided by denominator value (D) multiplied by 100 equals percentage (%)			
Indicator Formula Numeric Expression		N / D = %			
Linkage	Lir	nkage Options	ΕN	ISA Data Elements	
Limago		name		EMSA #29	
		dob		EMSA #35	
		age		EMSA #36	
		gender		EMSA #38	
		admit date		EMSA#?	
		procedures		EMSA #73	
Stratification		Options		EMSA Data Elements	
		by age		EMSA #36	
		by gender		EMSA #38	
		by incident type		EMSA #8	
		by response times		EMSA #17-20	
		by scene times		EMSA #8	
		by provider level		EMSA #73 (	
Indicator Exclusion Criteria		Injuries other than thermal bu	ırns		
		Non-critical trauma patients			
		Non-trauma patients			
References					
		Cowley, RA (1976) The resu	scita	ation and stabilization of major	
		multiple trauma patients in a	trau	ma center environment. Clinical	
		Medicine. 83(14)			
		Cales, R. H. and Helig, Jr., V			
		Aspen Publishers. Rockville,			
		Local EMS Trauma Policies i			
				y Trauma Registry; Limitations	
		of Prehospital Index in Identification Trauma Centers. Ann of Eme			
Source		California EMSA Vision Proje		viou, 20.2, 130-131. 1333	
Source	Ţ	Camorna Elvion Vision Proje	<del>,</del> Ul		

CORE INDICATOR Index # TR1I	CRITICAL TRAUMA	
Measure	Transport Time Less Than 10	minutes
CORE INDICATOR REF	TRAUMA - ADULT	
#TR1	TREATMENT PROTOCOL UTIL	
Objective	to measure % of critical traur hospital time is under ten mir	•
Classification	medical care - clinical	iules
Type of Measure	□ Process	
Domain of Performance	□ Effectiveness	
Indicator Reporting Value	□ %	
Display Format	□ List	
	☐ Cube Chart☐ Bar Chart	
	☐ Line Graph	
	□ Control Chart	
Frequency of Display	☐ Monthly x 12	
Measures of Central	□ mean - Yes	
Tendency	□ mode - No □ variance - No	
	□ variance - No □ standard deviation - Yes	
Trending Analysis		
Minimum Data Values	☐ 30 values per measure	
Sampling	□ Periodic - Rate	
Aggregation	□ Yes	
Blinded	☐ Yes	
Beta Testing Population Denominator (D)	<ul><li>None to Date</li><li>the number of all critical trau</li></ul>	ma cases
Denominator	Inclusion Criteria	EMSA Data Elements
	<ul><li>patient has reached age 15</li></ul>	□ EMSA#
	□ trauma is an injury caused by blunt or penetrating	
	kinematic mechanism in	
	the prehospital setting	
	□ Critical is an adult patient	□ EMSA#
	with any of the following	
	physiologic criteria:	
	☐ Critical is an adult patient	
	with any of the following	
	physiologic criteria:	
	meets local EMS trauma	
	criteria which mandates	
	triage to a designated trauma hospital.	
	l adma noophan	
	<ul><li>specified query time period</li></ul>	
	same as numerator	
Denominator Data Source	□ LEMSA	□ EMSA#
Denominator Data Source	☐ Designated Trauma Hospital	
	□ EMS Medical Records	
	☐ Hospital discharge records	
Domitalian Out	OSHPD discharge record	ant times in less they 40 miles
Population Subset Numerator (N)	□ the number cases are transp	or ume is less than 10 min
Numerator	Inclusion Criteria	EMSA Data Elements
	☐ Transport time is from	□ EMSA#

(wheel turn) enroute to (wheel stop) arrival at receiving facility  Subset of denominator specified query time period	
same as denominator  Numerator Data Source  LEMSA	
□ Designated Trauma Hospital	
□ EMS Medical Records	
□ Hospital discharge records □ OSHPD discharge record	
Description of Indicator ☐ numerator value (N) divided by denominator value (D) mu	Itiplied
Formula by 100 equals percentage (%)	-
Indicator Formula	
Numeric Expression  Linkage Linkage Options EMSA Data Elements	
Linkage Linkage Options EMSA Data Elements  □ name □ EMSA #29	
□ dob □ EMSA #35	
□ age □ EMSA #36	
□ gender □ EMSA #38	
□ admit date □ EMSA # ?	
□ procedures □ EMSA #73	
Stratification Options EMSA Data Element	s
□ by age □ EMSA #36	
□ by gender □ EMSA #38	
□ by incident type □ EMSA #8	
□ by response times □ EMSA #0	
□ by scene times □ EMSA #8	
by provider level EMSA #73 (	
Indicator Exclusion Criteria □ Non-critical trauma patients □ Non-trauma patients	
☐ Transport Times 10 min or greater	
References	le and
Guidelines for EMS System Evaluation and Improvement	
Project; 2000	
☐ Cowley, RA (1976) The resuscitation and stabilization of r	najor
multiple trauma patients in a trauma center environment.	
Medicine. 83(14)	
□ Cales, R. H. and Helig, Jr., W. (1986) Trauma Care Syste	ms.
Aonan Dubliahara Daalailla IMD	
Aspen Publishers. Rockville, MD.	ı
□ Local EMS Trauma Policies if applicable	-4:
□ Local EMS Trauma Policies if applicable □ Plant. J Critical Trauma – Calgary Trauma Registry; Limit	
□ Local EMS Trauma Policies if applicable	or

CORE INDICATOR Index # TR1J	CRITICAL TRAUMA			
Measure	Transport Time Less Than 20 minutes			
CORE INDICATOR REF	TRAUMA - ADULT			
#TR1	TREATMENT PROTOCOL UTIL			
Objective		ma cases where transport to		
Classification	hospital time is under twenty medical care - clinical	/ minutes		
Type of Measure	□ medical care - clinical □ Process			
Domain of Performance	□ Effectiveness			
Indicator Reporting Value	□ %			
Display Format	□ List			
. ,	□ Cube Chart			
	□ Bar Chart			
	□ Line Graph			
	□ Process Control Chart			
Frequency of Display	☐ Monthly x 12			
Measures of Central	□ mean - Yes □ mode - No			
Tendency	□ mode - No □ variance - No			
	standard deviation - Yes			
Trending Analysis	□ NA			
Minimum Data Values	☐ 30 values per measure			
Sampling	□ Periodic - Rate			
Aggregation	□ Yes			
Blinded	□ Yes			
Beta Testing	None to Date			
Population Denominator (D)	the number of all critical trau			
Denominator	Inclusion Criteria	EMSA Data Elements		
	patient has reached age 15	□ EMSA#		
	□ trauma is an injury caused			
	by blunt or penetrating			
	kinematic mechanism in			
	the prehospital setting	□ EMSA#		
	☐ Critical is an adult patient	□ EMSA#		
	with any of the following			
	physiologic criteria:			
	meets local EMS trauma			
	criteria which mandates			
	triage to a designated			
	trauma hospital.			
	D specified quary time period			
	specified query time period same as			
Denominator Data Source	□ LEMSA			
	<ul><li>Designated Trauma Hospita</li></ul>	ıl		
	□ EMS Medical Records			
	<ul><li>Hospital discharge records</li></ul>			
	□ OSHPD discharge record			
Population Subset	the number cases are transplant	port time is less than 20 min		
Numerator (N) Numerator	Inclusion Criteria	EMSA Data Elements		
Numerator	☐ Transport time is from	□ EMSA#		
	(wheel turn) enroute to	□ LINIO/A#		
	(wheel stop) arrival at			
	receiving facility			
	□ Subset of denominator			

		specified query time period		
		same as denominator		
Numerator Data Source		LEMSA		
		Designated Trauma Hospital		
		EMS Medical Records		
		Hospital discharge records		
		OSHPD discharge record		
Description of Indicator				enominator value (D) multiplied
Formula		by 100 equals percentage (%	b)	
Indicator Formula		N / D = %		
Numeric Expression				IOA Bata Flancata
Linkage		nkage Options		ISA Data Elements
		name		EMSA #29
		dob		EMSA #35
		age		EMSA #36 EMSA #38
		gender		EMSA # ?
		admit date		EMSA # ? EMSA #73
Stratification	ן כ	procedures Options	]	EMSA Data Elements
Stratification		by age		EMSA #36
	ם כ	by gender		EMSA #38
		by incident type		EMSA #8
		by response times		EMSA #0
		by scene times		EMSA #8
		by provider level		EMSA #73 (
Indicator Exclusion Criteria		Non-critical trauma patients		`
		Non-trauma patients		
		Transport Times 20 min or gi	eate	er
References				ain-Valley EMS; Standards and
		Guidelines for EMS System I	Eval	uation and Improvement
		Project; 2000		
		• , ,		tion and stabilization of major
			trau	ma center environment. Clinical
	_	Medicine. 83(14)		000) T
		Cales, R. H. and Helig, Jr., V		
		Aspen Publishers. Rockville,		
		Local EMS Trauma Policies i		
				y Trauma Registry; Limitations
		of Prehospital Index in Identif		
Source		Trauma Centers. Ann of Eme California EMSA Vision Proje		/ieu, 20.2, 133-137. 1990
Source		Camornia Eivioa vision Proje	UL	

CORE INDICATOR Index # TR1K	CR	ITICAL TRAUMA		
Measure	Tri	age to Specialty Care Cente	<u>er</u>	
CORE INDICATOR REF #TR1		AUMA - ADULT EATMENT PROTOCOL UTIL	IZAT	ΓΙΟΝ
Objective		to measure % of critical traur		•
		designated trauma centers o hospitals	r des	signated trauma specialty care
Classification		medical care - clinical		
Type of Measure		Process		
Domain of Performance		Compliance		
Indicator Reporting Value		%		
Display Format		List		
		Cube Chart		
		Bar Chart		
		Line Graph		
		Process Control Chart		
Frequency of Display  Measures of Central	0	Monthly x 12		
		mean - Yes		
Tendency		mode - No variance - No		
		standard deviation - Yes		
Trending Analysis	<u> </u>	NA		
Minimum Data Values		30 values per measure		
Sampling	_	Periodic - Rate		
Aggregation		Yes		
Blinded		Yes		
Beta Testing		None to Date		
Population Denominator (D)		the number of all critical trau	ma d	cases
Denominator	Inc	lusion Criteria	EN	ISA Data Elements
		patient has reached age 15		EMSA#
		trauma is an injury caused		
		by blunt or penetrating		
		kinematic mechanism in		
		the prehospital setting		EMSA#
	_	Critical is an adult patient with any of the following	_	EMSA#
		physiologic criteria:		
		meets local EMS trauma		
		criteria which mandates		
		triage to a designated		
		trauma hospital.		
		specified query time period		
		same as numerator		
Denominator Data Source		LEMSA		
		Designated Trauma Hospital EMS Medical Records		
		Hospital discharge records OSHPD discharge record		
Population Subset			tran	sported to a designated trauma
Numerator (N)	_	center or designated trauma		
Numerator	Inc	lusion Criteria		ISA Data Elements
		Trauma Center or Trauma		EMSA#
		Specialty Care Centers are		
		hospitals specifically		
		designated by local EMS Authority as receiving		

facilities for trauma patients meeting specific local trauma criteria. u subset of denominator u specified query time period	
□ subset of denominator	
□ specified query time period	
a opcomed query time period	
same as denominator	
Numerator Data Source   LEMSA	
□ Designated Trauma Hospital	
□ EMS Medical Records	
□ Hospital discharge records	
□ OSHPD discharge record	
Description of Indicator unumerator value (N) divided by denominator value (D) mul	tiplied
Formula by 100 equals percentage (%)	
Indicator Formula	
Numeric Expression  Linkage   Linkage Options   EMSA Data Elements	
□ name □ EMSA #29 □ EMSA #35	
□ age □ EMSA #36	
□ gender □ EMSA #38	
□ admit date □ EMSA # ?	
procedures   EMSA #73	
Stratification Options EMSA Data Elements	s
□ by age □ EMSA #36	_
, 5	
, ,	
□ by gender □ EMSA #38	
□ by gender □ EMSA #38 □ by incident type □ EMSA #8	
by gender by incident type by response times by scene times by scene times by provider level  EMSA #8 EMSA #0 EMSA #8 EMSA #8	
by gender by gender by incident type by incident type by response times by response times by scene times by provider level  Indicator Exclusion Criteria  Non-critical trauma patients	
by gender by gender by incident type by response times by response times by scene times by provider level by provider level controlled in Non-critical trauma patients Non-trauma patients	
by gender by incident type by incident type by response times by scene times by provider level by provider level by provider level control con	s and
by gender by incident type by incident type by response times by scene times by provider level by provider level by provider level chicator Exclusion Criteria Non-critical trauma patients Non-trauma patients Critical Trauma Indicator; Mountain-Valley EMS; Standard: Guidelines for EMS System Evaluation and Improvement	s and
by gender by incident type by incident type by response times by scene times by provider level by provider level by provider level by provider level critical trauma patients Non-trauma patients Critical Trauma Indicator; Mountain-Valley EMS; Standard: Guidelines for EMS System Evaluation and Improvement Project; 2000	
by gender by incident type by incident type by response times by scene times by provider level by provider level by provider level critical trauma patients Non-trauma patients Critical Trauma Indicator; Mountain-Valley EMS; Standard: Guidelines for EMS System Fvaluation and Improvement Project; 2000 Cowley, RA (1976) The resuscitation and stabilization of mountain-Value and stabilization and stabilization of mountain-Value and stabilization of mountain-Value and stabilization of mountain-Value and stabilization of mountain-Value and stabilization and stabilization of mountain-Value and stabilization	najor
by gender by incident type by incident type by response times by scene times by provider level by provider level EMSA #8 EMSA #0 EMSA #8 EMSA #8 By provider level EMSA #73 (  Indicator Exclusion Criteria Non-critical trauma patients Non-trauma patients Critical Trauma Indicator; Mountain-Valley EMS; Standard Guidelines for EMS System Evaluation and Improvement Project; 2000 Cowley, RA (1976) The resuscitation and stabilization of multiple trauma patients in a trauma center environment.	najor
by gender by incident type by incident type by response times by response times by scene times by provider level critical trauma patients Non-trauma patients critical Trauma Indicator; Mountain-Valley EMS; Standard: Guidelines for EMS System by System Evaluation and Improvement Project; 2000 Cowley, RA (1976) The resuscitation and stabilization of multiple trauma patients in a Medicine. 83(14)	najor Clinical
by gender by incident type by incident type by response times by response times by scene times by provider level critical trauma patients Non-trauma patients Critical Trauma Indicator; Mountain-Valley EMS; Standard: Guidelines for EMS System Foject; 2000 Cowley, RA (1976) The resuscitation and stabilization of multiple trauma patients in a Medicine. 83(14) Cales, R. H. and Helig, Jr., W. (1986) Trauma Care System	najor Clinical
by gender by incident type by response times by response times by scene times by provider level by provider level by provider level critical trauma patients Non-trauma patients Critical Trauma Indicator; Mountain-Valley EMS; Standard: Guidelines for EMS System Project; 2000 Cowley, RA (1976) The resuscitation and stabilization of multiple trauma patients in a multiple trauma patients in a Medicine. 83(14) Cales, R. H. and Helig, Jr., W. (1986) Trauma Care System Aspen Publishers. Rockville, MD.	najor Clinical
by gender by incident type by response times by scene times by provider level  Indicator Exclusion Criteria  Non-critical trauma patients Non-trauma patients Critical Trauma Indicator; Mountain-Valley EMS; Standard: Guidelines for EMS System Project; 2000 Cowley, RA (1976) The resuscitation and stabilization of multiple trauma patients in a Medicine. 83(14) Cales, R. H. and Helig, Jr., W. (1986) Trauma Care System Aspen Publishers. Rockville, MD. Local EMS Trauma Policies if applicable	najor Clinical ms.
by gender by incident type by response times by response times by provider level by provider level by provider level critical trauma patients Non-trauma patients Critical Trauma Indicator; Mountain-Valley EMS; Standard: Guidelines for EMS System Evaluation and Improvement Project; 2000 Cowley, RA (1976) The resuscitation and stabilization of multiple trauma patients in a trauma center environment. Medicine. 83(14) Cales, R. H. and Helig, Jr., W. (1986) Trauma Care System Aspen Publishers. Rockville, MD. Local EMS Trauma Policies if applicable Plant. J Critical Trauma – Calgary Trauma Registry; Limital	najor Clinical ms. ations
by gender by incident type by response times by scene times by provider level  Indicator Exclusion Criteria  Non-critical trauma patients Non-trauma patients Critical Trauma Indicator; Mountain-Valley EMS; Standard: Guidelines for EMS System Project; 2000 Cowley, RA (1976) The resuscitation and stabilization of multiple trauma patients in a Medicine. 83(14) Cales, R. H. and Helig, Jr., W. (1986) Trauma Care System Aspen Publishers. Rockville, MD. Local EMS Trauma Policies if applicable	najor Clinical ms. ations

CORE INDICATOR Index # TR1L	CR	ITICAL TRAUMA				
Measure	Ad	vanced Airway Inserted				
CORE INDICATOR REF #TR1		AUMA - ADULT EATMENT PROTOCOL UTIL	IZATION			
Objective			na cases where an advanced			
01 101 11		airway is inserted in the pref	nospital setting			
Classification		medical care - clinical				
Type of Measure	0	Process				
Domain of Performance		Skills Performance %				
Indicator Reporting Value Display Format		List				
Display Format		Cube Chart				
		Bar Chart				
		Line Graph				
Frequency of Display		Monthly x 12				
Measures of Central		mean - Yes				
Tendency		mode - No				
		variance - No				
		standard deviation - Yes				
Trending Analysis		NA				
Minimum Data Values		30 values per measure				
Sampling		Periodic - Rate				
Aggregation		Yes				
Blinded		Yes				
Beta Testing		None to Date				
Population Denominator (D)		the number of all critical trau				
Denominator	Inc	lusion Criteria	EMSA Data Elements			
		nationt has reached age 15	□ FMSA#			
		patient has reached age 15	□ EMSA#			
	0	trauma is an injury caused	□ EMSA#			
			□ EMSA#			
		trauma is an injury caused by blunt or penetrating kinematic mechanism in	□ EMSA#			
		trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting	□ EMSA#			
		trauma is an injury caused by blunt or penetrating kinematic mechanism in				
		trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting				
		trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria:				
		trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma				
		trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates				
		trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated				
		trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates				
		trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.				
	0	trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator				
Denominator Data Source	0 0	trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA				
Denominator Data Source		by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital				
Denominator Data Source		by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records				
Denominator Data Source		trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records				
		trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records OSHPD discharge record	□ EMSA#			
Population Subset		trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records	□ EMSA#			
Population Subset Numerator (N)		trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records OSHPD discharge record	□ EMSA#			
Population Subset		trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records OSHPD discharge record the number cases where advertiged.	□ EMSA#			
Population Subset Numerator (N)		trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records OSHPD discharge record	canced airway is inserted  EMSA Data Elements			
Population Subset Numerator (N)		trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records OSHPD discharge record the number cases where adversely some contents.	canced airway is inserted  EMSA Data Elements			
Population Subset Numerator (N)		trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting  Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records OSHPD discharge record the number cases where adversellusion Criteria  Advanced airway is oral or nasal tracheal intubation	canced airway is inserted  EMSA Data Elements			

		same as denominator		
Numerator Data Source		LEMSA		
		Designated Trauma Hospital		
		EMS Medical Records		
		Hospital discharge records		
	) (	OSHPD discharge record		
Description of Indicator	םןנ		ov d	enominator value (D) multiplied
Formula	_	by 100 equals percentage (%	•	chominator value (b) mataplica
Indicator Formula		N / D = %	,,	
Numeric Expression	•	N/D= /0		
Linkage	Lir	nkage Options	EN	ISA Data Elements
		name		EMSA #29
		dob		EMSA #35
		age	_	EMSA #36
		gender	_	EMSA #38
		admit date		EMSA # ?
		procedures		EMSA #73
Stratification		Options		EMSA Data Elements
		by age		EMSA #36
		by gender		EMSA #38
		by incident type		EMSA #8
		by response times		EMSA #0
		by scene times		EMSA #8
		by provider level		EMSA #73 (
Indicator Exclusion Criteria		Non-critical trauma patients		,
		Non-trauma patients		
		Transport Times 20 min or gr	eate	er
References				ain-Valley EMS; Standards and
		Guidelines for EMS System I		
		Project; 2000		·
			scita	tion and stabilization of major
				ma center environment. Clinical
		Medicine. 83(14)		
		Cales, R. H. and Helig, Jr., V	V. (1	986) Trauma Care Systems.
		Aspen Publishers. Rockville,		
		Local EMS Trauma Policies i		
				y Trauma Registry; Limitations
		of Prehospital Index in Identi	fyind	Patients in Need of Major
		Trauma Centers. Ann of Eme		
Source		California EMSA Vision Proje		·

CORE INDICATOR Index # TR1M	CR	ITICAL TRAUMA			
Measure	Pre	ehospital Oxygenation			
CORE INDICATOR REF #TR1		AUMA - ADULT EATMENT PROTOCOL UTIL	IZATION		
Objective			na cases where oxygen saturation		
		levels are 98% or above upo	n arrival at receiving facilities		
Classification		medical care - clinical			
Type of Measure		Process			
Domain of Performance		Skills Performance			
Indicator Reporting Value		%			
Display Format		List Cube Chart			
		Bar Chart			
	ם כ	Line Graph			
Frequency of Display		Monthly x 12			
Measures of Central		mean - Yes			
Tendency		mode - No			
		variance - No			
		standard deviation - Yes			
Trending Analysis		NA			
Minimum Data Values		30 values per measure			
Sampling		Periodic - Rate			
Aggregation		Yes			
Blinded		Yes			
Beta Testing	<b>-</b>	None to Date			
Population Denominator (D)  Denominator	Inc	the number of all critical trau	ma cases EMSA Data Elements		
Denominator	inc	iusion Criteria	EWSA Data Elements		
		patient has reached age 15	□ EMSA#		
		trauma is an injury caused			
		by blunt or penetrating			
		kinematic mechanism in			
		the prehospital setting			
			□ EMSA#		
		Critical is an adult patient	□ EMSA#		
		with any of the following	□ EMSA#		
		with any of the following physiologic criteria:	□ EMSA#		
		with any of the following physiologic criteria: meets local EMS trauma	□ EMSA#		
		with any of the following physiologic criteria: meets local EMS trauma criteria which mandates	□ EMSA#		
		with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated	□ EMSA#		
		with any of the following physiologic criteria: meets local EMS trauma criteria which mandates	□ EMSA#		
		with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.	□ EMSA#		
Denominator Data Source	_	with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator	□ EMSA#		
Denominator Data Source		with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator LEMSA	□ EMSA#		
Denominator Data Source	0	with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator	□ EMSA#		
Denominator Data Source	0 0 0	with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator LEMSA Designated Trauma Hospital	□ EMSA#		
	0 0 0	with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records OSHPD discharge record			
Population Subset		with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records OSHPD discharge record the number cases where the	patient arrives at receiving facility		
Population Subset Numerator (N)		with any of the following physiologic criteria:   meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records OSHPD discharge record the number cases where the with oxygen saturation level of	patient arrives at receiving facility of 98% or higher.		
Population Subset		with any of the following physiologic criteria:   meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records OSHPD discharge record the number cases where the with oxygen saturation level of the second second content of the second	patient arrives at receiving facility of 98% or higher.  EMSA Data Elements		
Population Subset Numerator (N)		with any of the following physiologic criteria:   meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records OSHPD discharge record the number cases where the with oxygen saturation level of the state	patient arrives at receiving facility of 98% or higher.		
Population Subset Numerator (N)		with any of the following physiologic criteria:   meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records OSHPD discharge record the number cases where the with oxygen saturation level of the state	patient arrives at receiving facility of 98% or higher.  EMSA Data Elements		
Population Subset Numerator (N)		with any of the following physiologic criteria:   meets local EMS trauma criteria which mandates triage to a designated trauma hospital.  specified query time period same as numerator  LEMSA Designated Trauma Hospital EMS Medical Records Hospital discharge records OSHPD discharge record the number cases where the with oxygen saturation level of the state	patient arrives at receiving facility of 98% or higher.  EMSA Data Elements		

Numerator Data Source		Oxygen saturation is measured (%) upon arrival at receiving hospital by pulse oxymeter. subset of denominator specified query time period same as denominator LEMSA		
	0 0 0	Designated Trauma Hospital EMS Medical Records Hospital discharge records OSHPD discharge record		
Description of Indicator			oy d	enominator value (D) multiplied
Formula		by 100 equals percentage (%	5)	
Indicator Formula Numeric Expression		N / D = %		
Linkage	Lir	nkage Options	EN	ISA Data Elements
		name dob age gender admit date procedures		EMSA #29 EMSA #35 EMSA #36 EMSA #38 EMSA # ? EMSA #73
Stratification		Options		EMSA Data Elements
on an industrial		by age		EMSA #36
		by gender		EMSA #38
		by incident type		EMSA #8
		by response times		EMSA #0
		by scene times		EMSA #8
Indicator Exclusion Criteria		by provider level Non-critical trauma patients		EMSA #73 (
Indicator Exclusion Criteria		Non-trauma patients		
References				
Kelefellous		Critical Trauma Indicator; Mo Guidelines for EMS System I		
Kelerenees		Critical Trauma Indicator; Mo Guidelines for EMS System I Project; 2000 Cowley, RA (1976) The resus	Eval scita	
Kelerenees		Critical Trauma Indicator; Mc Guidelines for EMS System I Project; 2000 Cowley, RA (1976) The resumultiple trauma patients in a Medicine. 83(14)	Eval scita trau	uation and Improvement tion and stabilization of major ma center environment. Clinical
Kelerenees		Critical Trauma Indicator; Mc Guidelines for EMS System I Project; 2000 Cowley, RA (1976) The resus multiple trauma patients in a Medicine. 83(14) Cales, R. H. and Helig, Jr., V	Eval scita trau V. (1	uation and Improvement ition and stabilization of major ma center environment. Clinical 986) Trauma Care Systems.
Kelerenees	0	Critical Trauma Indicator; Mc Guidelines for EMS System I Project; 2000 Cowley, RA (1976) The resus multiple trauma patients in a Medicine. 83(14) Cales, R. H. and Helig, Jr., V Aspen Publishers. Rockville,	Eval scita trau V. (1 MD.	uation and Improvement tion and stabilization of major ma center environment. Clinical 986) Trauma Care Systems.
Kelerenees		Critical Trauma Indicator; McGuidelines for EMS System In Project; 2000 Cowley, RA (1976) The resumultiple trauma patients in a Medicine. 83(14) Cales, R. H. and Helig, Jr., V Aspen Publishers. Rockville, Local EMS Trauma Policies in Resuma	ecita trau V. (1 MD. f ap	uation and Improvement  tion and stabilization of major ma center environment. Clinical  986) Trauma Care Systems.
Kelerenees	0	Critical Trauma Indicator; McGuidelines for EMS System In Project; 2000 Cowley, RA (1976) The resusmultiple trauma patients in a Medicine. 83(14) Cales, R. H. and Helig, Jr., V. Aspen Publishers. Rockville, Local EMS Trauma Policies in Plant. J Critical Trauma – Ca	ecita trau V. (1 MD. f ap	uation and Improvement  Ition and stabilization of major ma center environment. Clinical  986) Trauma Care Systems.  plicable y Trauma Registry; Limitations
References		Critical Trauma Indicator; McGuidelines for EMS System In Project; 2000 Cowley, RA (1976) The resumultiple trauma patients in a Medicine. 83(14) Cales, R. H. and Helig, Jr., V Aspen Publishers. Rockville, Local EMS Trauma Policies in Resuma	erg N	uation and Improvement  tion and stabilization of major ma center environment. Clinical  986) Trauma Care Systems.  plicable y Trauma Registry; Limitations y Patients in Need of Major

CORE INDICATOR Index # TR1N	CRITICAL TRAUMA				
Measure	Survival to ED Admission				
CORE INDICATOR REF #TR1	TRAUMA - ADULT TREATMENT PROTOCOL UTILI				
Objective	□ to measure % of patients who	o survive to Emergency department			
	(ED) admission				
Classification	medical care - clinical				
Type of Measure  Domain of Performance	<ul><li>outcome</li><li>Effectiveness</li></ul>				
Indicator Reporting Value	□ Effectiveness □ %				
Display Format	☐ Cube Chart				
Display I offilat	Bar Chart				
	☐ Line Graph				
Frequency of Display	☐ Monthly x 12				
Measures of Central	□ mean - Yes				
Tendency	□ mode - No				
	□ variance - No				
	standard deviation - Yes				
Trending Analysis	□ NA				
Minimum Data Values	<ul><li>30 values per measure</li><li>Periodic - Rate</li></ul>				
Sampling	☐ Periodic - Rate ☐ Yes				
Aggregation Blinded	☐ Yes				
Beta Testing	□ None to Date				
Population Denominator (D)		who suffer a critical trauma event			
Denominator	Inclusion Criteria	EMSA Data Elements			
	<ul><li>patient has reached age 15</li></ul>	□ EMSA #36			
	trauma is an injury caused				
	by blunt or penetrating	□ EMSA#			
	kinematic mechanism in				
	the prehospital setting	□ EMSA #54			
	☐ Critical is an adult patient	□ EMSA #52			
	with any of the following				
	physiologic criteria:				
	meets local EMS trauma	□ EMSA #11			
	criteria which mandates				
	triage to a designated trauma hospital.				
	tradina nospital.				
	□ specified query time period				
	same as numerator				
Denominator Data Source	□ LEMSA				
	<ul><li>Designated Trauma Hospital</li></ul>				
	□ EMS Medical Records				
	□ Hospital discharge records				
Donulation Subset	OSHPD discharge record EM				
Population Subset Numerator (N)	the number of patients who s	BUINIVE TO ED AUTHISSION			
Numerator	Inclusion Criteria EMSA Data Elements				
114	patients who survive to	☐ discharge status (TBD)			
	hospital discharge	,			
Numerator Data Source	□ hospital discharge records				
	□ OSHPD discharge record				
_	□ trauma registry				
Description of Indicator	unmerator value (N) divided l	by denominator value (D) multiplied			

Formula		by 100 equals percentage (%)		
Indicator Formula		N / D = %		
Numeric Expression				
Linkage	Lir	kage Options	EN	ISA Data Elements
		name		EMSA #29
		dob		EMSA #35
		age		EMSA #36
		gender		EMSA #38
		admit date		EMSA#?
		procedures		EMSA #73
Stratification		Options		EMSA Data Elements
		by age		EMSA #36
		by gender		EMSA #38
		by incident type		EMSA #8
		by response times		EMSA #17-20
		by scene times		EMSA #8
		by provider level		EMSA #73
Indicator Exclusion Criteria		Non-critical trauma patients		
		Non-trauma patients		
		patient has not survived to hospital discharge		
References		Critical Trauma Indicator; Mountain-Valley EMS; Standards and		
		Guidelines for EMS System Evaluation and Improvement		
		Project; 2000		
		Cowley, RA (1976) The resuscitation and stabilization of major		
		multiple trauma patients in a trauma center environment. Clinical		
		Medicine. 83(14)	V (1	096) Trouma Cara Systems
		Cales, R. H. and Helig, Jr., W. (1986) Trauma Care Systems.		
		Aspen Publishers. Rockville, Local EMS Trauma Policies i		
				y Trauma Registry; Limitations
	_		•	
		of Prehospital Index in Identifying Patients in Need of Major Trauma Centers. Ann of Emerg Med; 26:2, 133-137. 1995		
Source		California EMSA Vision Project		
Course	_	Camerina Entrol Victori Froje		

CORE INDICATOR Index # TR10	CRITICAL TRAUMA				
Measure	Survival to Hospital Discharge				
CORE INDICATOR REF #TR1		TRAUMA - ADULT TREATMENT PROTOCOL UTILIZATION			
Objective	to measure % of patients who suffering a critical trauma ever	o survive to hospital discharge after ent			
Classification	□ medical care - clinical				
Type of Measure	□ outcome				
Domain of Performance	□ Effectiveness				
Indicator Reporting Value	□ %				
Display Format	☐ Cube Chart				
2.00.00	□ Bar Chart				
	□ Line Graph				
Frequency of Display	☐ Monthly x 12				
Measures of Central	□ mean - Yes				
Tendency	□ mode - No				
	□ variance - No				
	<ul><li>standard deviation - Yes</li></ul>				
Trending Analysis	□ NA				
Minimum Data Values	30 values per measure				
Sampling	□ Periodic - Rate				
Aggregation	□ Yes				
Blinded	□ Yes				
Beta Testing	□ None to Date				
Population Denominator (D)		who suffer a critical trauma event			
Denominator	Inclusion Criteria	EMSA Data Elements			
	<ul> <li>patient has reached age 15</li> <li>trauma is an injury caused by blunt or penetrating kinematic mechanism in the prehospital setting</li> <li>Critical is an adult patient with any of the following physiologic criteria: meets local EMS trauma criteria which mandates triage to a designated trauma hospital.</li> <li>specified query time period same as numerator</li> </ul>	<ul> <li>□ EMSA #36</li> <li>□ EMSA #54VTAC, 54VFIB</li> <li>□ EMSA #54C-A</li> <li>□ EMSA #54</li> <li>□ EMSA #52</li> <li>□ EMSA #11</li> </ul>			
Denominator Data Source	□ LEMSA				
	<ul> <li>Designated Trauma Hospital</li> <li>EMS Medical Records</li> <li>Hospital discharge records</li> <li>OSHPD discharge record EMS Medical Records</li> </ul>				
Population Subset Numerator (N)	□ the number of patients who survive to hospital discharge				
Numerator	Inclusi on Criteria	EMSA Data Elements			
	□ patients who survive to	□ discharge status ( <b>TBD)</b>			
	hospital discharge				
Numerator Data Source	<ul><li>hospital discharge records</li><li>OSHPD discharge record</li><li>trauma registry</li></ul>				

Description of Indicator		numerator value (N) divided by denominator value (D) multiplied		
Formula		by 100 equals percentage (%	6)	
Indicator Formula		N / D = %		
Numeric Expression				
Linkage	Lir	nkage Options	EN	ISA Data Elements
		name		EMSA #29
		dob		EMSA #35
		age		EMSA #36
		gender		EMSA #38
		admit date		EMSA # ?
		procedures		EMSA #73
Stratification		Options		EMSA Data Elements
		by age		EMSA #36
		by gender		EMSA #38
		by incident type		EMSA #8
		by response times		EMSA #17-20
		by scene times		EMSA #8
		by provider level		EMSA #73
Indicator Exclusion Criteria		Non-critical trauma patients		
		Non-trauma patients	•	tal diadaana
Deference		patient has not survived to hospital discharge Critical Trauma Indicator; Mountain-Valley EMS; Standards and		
References				
		Guidelines for EMS System Evaluation and Improvement		
		Project; 2000		
		,, · · · · ( · · · · ) · · · · · · · · · ·		
		multiple trauma patients in a trauma center environment. Clinical		
		Medicine. 83(14)		
	_	Cales, R. H. and Helig, Jr., W. (1986) Trauma Care Systems. Aspen Publishers. Rockville, MD.		
		Local EMS Trauma Policies i		
		Plant. J Critical Trauma – Calgary Trauma Registry; Limitations		
	_	of Prehospital Index in Identifying Patients in Need of Major		
		Trauma Centers. Ann of Emerg Med; 26:2, 133-137. 1995		
Source		California EMSA Vision Project		